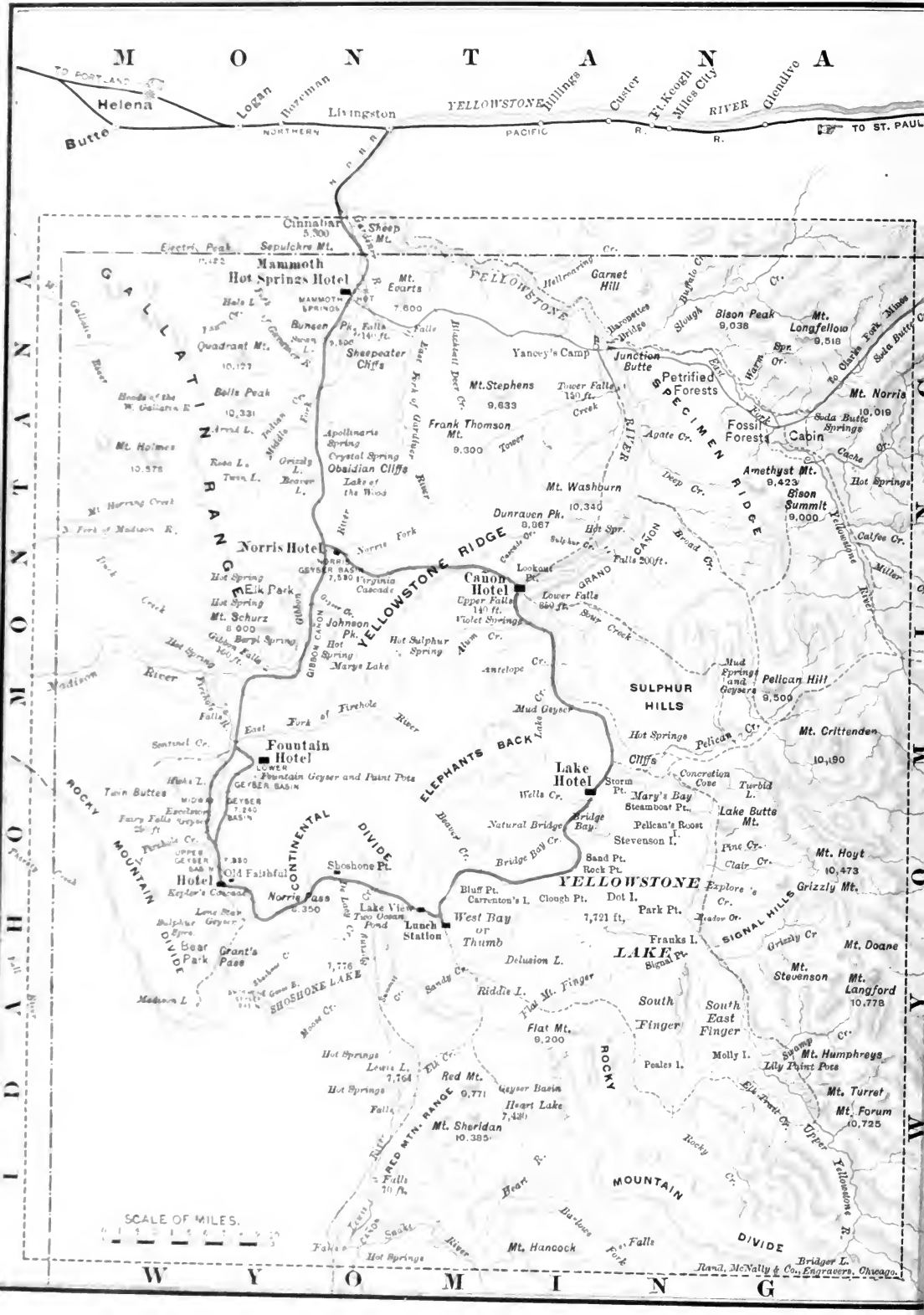
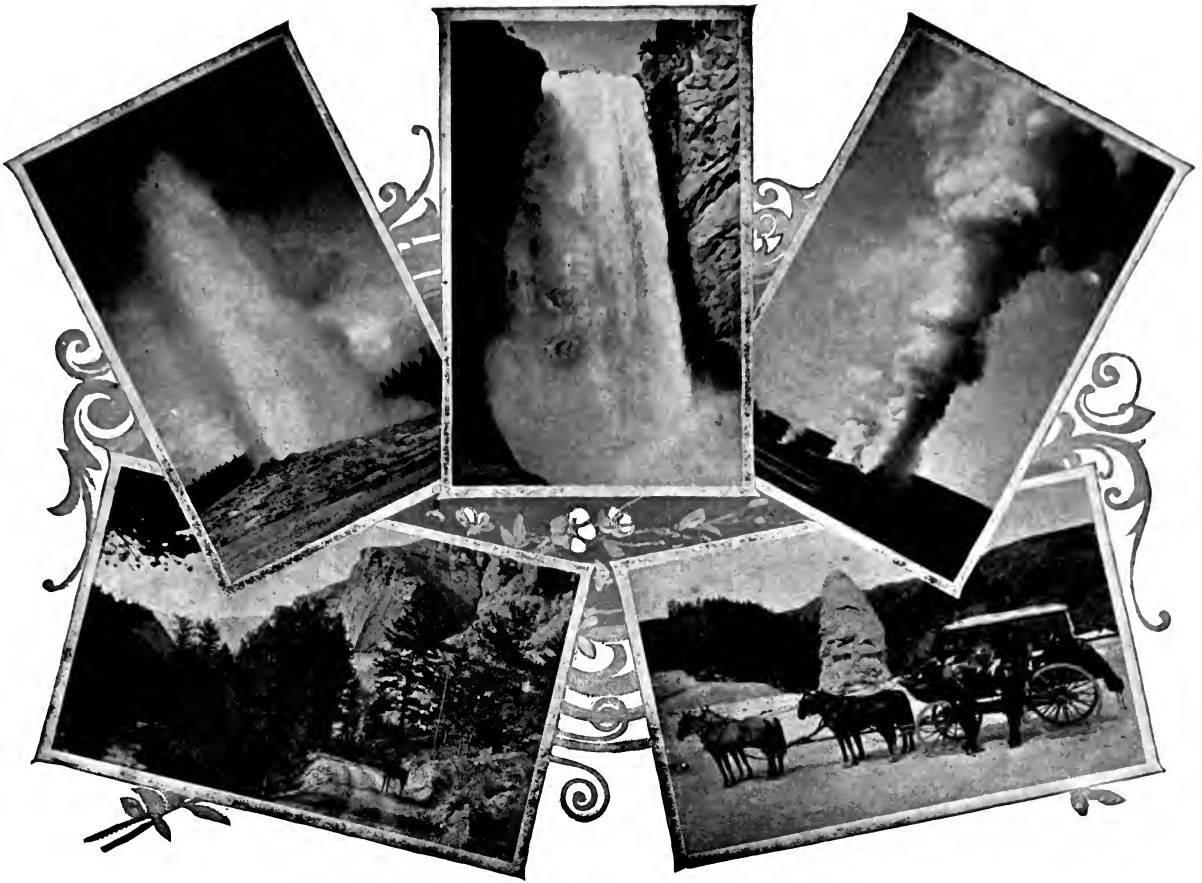

M O N T A N A
TO PORTLAND
Helena
Butte
Logan
Bozeman
Livingston
NORTHERN PACIFIC R. R.
YELLOWSTONE
Billings
Custer
Ft. Keogh
Miles City
RIVER R.
Glendive
TO ST. PAUL
N. P. R. R.
Cinnabar
Sheep Mt.
Electric Peak 10,992
Sepulchre Mt.
Mammoth Hot Springs Hotel
MAMMOTH HOT SPRINGS
Mt. Evarts 7,600
YELLOWSTONE
Hellgate Cr.
Garnet Hill
Buffalo Cr.
Slough Cr.
Bison Peak 9,038
Mt. Longfellow 9,518
Spr. Cr.
Warm
Charles Fork
Soda Butte Cr.
Gallatin River
GALLATIN RANGE
Hole L.
Bunsen Peak 8,740 ft.
Falls 9,500
Quadrant Mt. 10,127
Sheepeater Cliffs
Blacktail Deer Cr.
Yancey's Camp
Junction Butte
Petrified Forests
SPECIMEN RIDGE
East Fork
Light
Mt. Norris 10,019
Soda Butte Springs
Bells Peak 10,331
Heads of the W. Gallatin R.
Mt. Holmes 10,978
Mt. Stephens 9,633
Tower Falls 150 ft.
Tower Creek
Frank Thomson Mt. 9,300
Tower
Agate Cr.
Fossil Forest Cabin
Cache Cr.
Amethyst Mt. 9,423
Hot Springs
Apollinaris Spring
Crystal Spring
Obsidian Cliffs
Lake of the Woods
Mt. Washburn 10,340
Deep Cr.
Bison Summit 9,000
Mt. Herring Creek
S. Fork of Madison R.
Dunraven Pk. 9,967
Hot Spr.
Sulphur Cr.
Norris Hotel
NORRIS GEYSER BASIN 7,530
Norris Fork
YELLOWSTONE RIDGE
Canon Hotel
Lookout Pt.
Upper Falls 140 ft.
Lower Falls 360 ft.
GRAND CANON
Falls 200 ft.
Broad Cr.
Calfee Cr.
Miller
Elk Park
Hot Spring
Mt. Schurz 8,000
Virginia Cascade
Gibbon River
Johnson Pk.
Hot Spring
Hot Sulphur Spring
Violet Springs
Soap Creek
Gibbon Falls 84 ft.
Beryl Spring
Marys Lake
Madison River
Firehole River
Antelope Cr.
Mud Springs and Geysers
Pelican Hill 9,500
SULPHUR HILLS
Mud Geyser
Lake
ELEPHANTS BACK
East Fork of Firehole River
Sentinel Cr.
Fountain Hotel
LOWER GEYSER BASIN
Fountain Geyser and Paint Pots
Hot Springs Cliffs
Pelican Cr.
Mt. Crittenden 10,190
Lake Hotel
Storm Pt.
Concretion Cone
Turbid L.
Mary's Bay
Steamboat Pt.
Lake Butte Mt.
Wells Cr.
Natural Bridge
Bridge Bay
Pelican's Roost
Stevenson I.
Twin Buttes
MIDDLE GEYSER BASIN
Fairy Falls Geyser
Excelsior Geyser
Firehole Cr.
UPPER GEYSER BASIN
Old Faithful Hotel
Kepler's Cascade
Shoshone Pt.
Bridge Bay Cr.
Sand Pt.
Rock Pt.
YELLOWSTONE LAKE
Pine Cr.
Clair Cr.
Mt. Hoyt 10,473
Grizzly Mt.
Explorer Cr.
Norris Pass 8,350
Lake View
Two Ocean Pond
Lunch Station
Bluff Pt.
Carrington I.
Clough Pt.
Dot I.
West Bay or Thumb
7,721 ft.
Park Pt.
Meadow Cr.
SIGNAL HILLS
Grizzly Cr
Mt. Doane
Bear Park
Grant's Pass
Delusion L.
Franks I.
Signal Pt.
Mt. Stevenson
Mt. Langford 10,778
SHOSHONE LAKE
Riddle L.
Flat Mt. Finger
South Finger
South East Finger
Flat Mt. 9,200
Molly I.
Peales I.
Mt. Humphreys
Lily Paint Pots
Lewis L. 7,764
Red Mt.
Geyser Basin
Heart Lake 7,420
Mt. Turret
Mt. Forum 10,725
RED MTN. RANGE
Mt. Sheridan 10,385
Falls 70 ft.
Heart R.
MOUNTAIN
Mt. Hancock
Falls
DIVIDE
Bridger L.
SCALE OF MILES.
Rand, McNally & Co. Engravers, Chicago.
I D A H O
W Y O M I N G



GEYSERS AND FALLS OF THE YELLOWSTONE NATIONAL PARK.

A Ramble

. . . IN . . .

Wonderland

. . . BEING . . .

A DESCRIPTION OF THE MARVELOUS REGION TRAVERSED BY THE NORTHERN PACIFIC RAILROAD.

BY

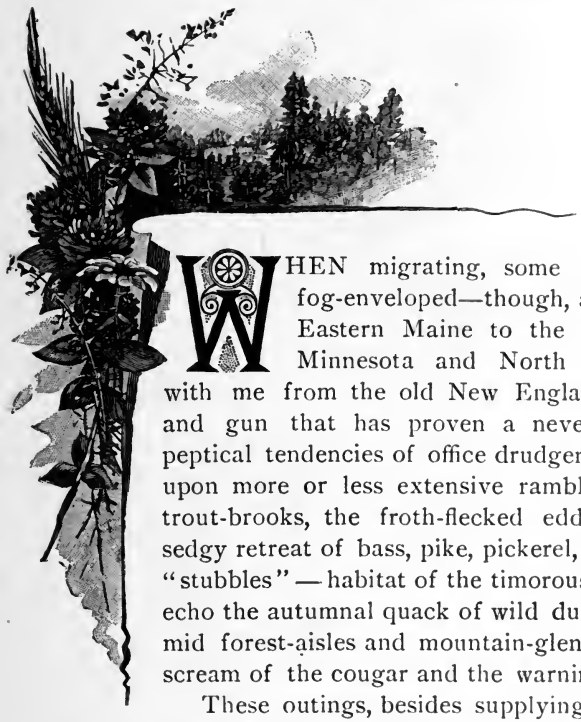
ALBERT B. GUPTILL

ILLUSTRATED

FROM PHOTOS. BY HAYNES.

ILLUSTRATIONS.

INTRODUCTORY.



WHEN migrating, some fifteen years since, from the fog-enveloped—though, at times, picturesque—shores of Eastern Maine to the breezy and flowery prairies of Minnesota and North Dakota, I fortunately brought with me from the old New England hills an innate love of rod and gun that has proven a never-failing panacea for the dyspeptical tendencies of office drudgery; annually taking me, as it has, upon more or less extensive rambles mid the dancing rapids of trout-brooks, the froth-flecked eddies of salmon-streams, and the sedgy retreat of bass, pike, pickerel, and muskallonge; among golden "stubbles" — habitat of the timorous grouse — and prairie-lakes that echo the autumnal quack of wild duck and honk of wild goose; or mid forest-aisles and mountain-glens, silent save for the occasional scream of the cougar and the warning "whistle" of the stately elk.

These outings, besides supplying healthful recreation, oftentimes afford excellent opportunity for an intimate acquaintance with Nature and her ways, and the gathering of material for sketch-writing, for which I confess a fondness.

A combination of these influences recently led me to make an extended tour of the charming region traversed by the Northern Pacific Railroad, with a view to attempting a description of its characteristics of surface, soil, and climate, its variety of resource, its scenic attractiveness, and other features of general interest — an effort to which the following pages are in the main devoted.

A Ramble in Wonderland.

CHAPTER I.

EARLY IMPRESSIONS RESPECTING THE FAR WEST, THE RESULT OF A COMBINATION OF UNFORTUNATE CIRCUMSTANCES AND KINDRED DISORDERS —THE GREAT AND GROWING WEST OF TO-DAY.

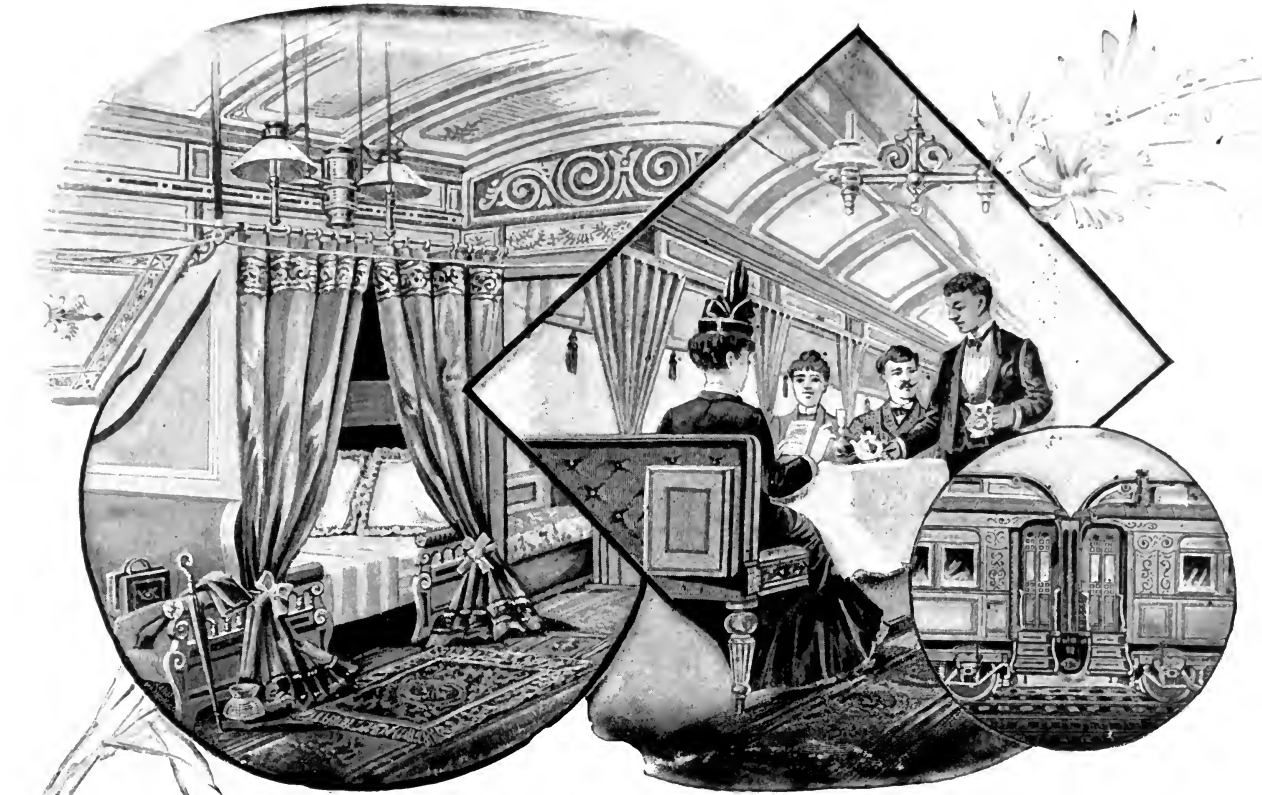
FROM early boyhood, that portion of the United States—commonly denominated "Our Northern Border"—extending westward from Lake Champlain to the snowy summits of the Cascade Mountains, and the blue waves of Puget Sound, just beyond, has, in connection with those alleged barren wastes—termed, in the nasal vernacular of my native heath, "The Boundless Peeraries of the Far West"—possessed an irresistible charm for me; so much so, that when my eyes would grow weary with watching the white sails of ocean-rovers plying in the coastwise commerce of Bay of Fundy seaports, or the sullen roar of breaking waves oppress me with a sense of dull monotony, the tales of adventure upon lake and prairie, in forest glade and mountain fastness, as told by the entertaining romancer of "Sunnyside," and the no less delightful biographer of "Leatherstocking," were wont to transform the puny fisher-lad into a hardy Western pioneer, clothe him in belted buckskin and beaded moccasin, thrill his soul with the melody of the rollicking boat-songs of the Canadian *voyageur*, and breathe into his drowsy brain dreams of conquest, in which the feathered scalp-lock of the hated Mingo played no unimportant part.

Happily, these thoughts were but the fanciful imaginings of a childhood barren of adventure, yet craving its spice, soon to be dispelled by the fuller knowledge that the days when the red man disputed the onward march of civilization had long since been numbered, and were remembered only as marking occurrences of historic interest; that where clustering wigwams once dotted the shores of the Great Lakes, and dusky warriors, on mischief bent, danced about blazing camp-fires, great and growing cities had sprung into

being; that the birchen canoe had given place to the steam-barge, and forest aisles that used to ring with the quavering war-cry, had for a generation echoed, instead, the shrill neigh of the iron-horse. But shattered as had been my dearest and most cherished idols, I little dreamed, as I used to read, again and again—"In the vaunted regions of the far west, several hundred miles beyond the Mississippi, extends a vast tract of uninhabited country, where there is neither to be seen the log-house of the white man nor the wigwam of the Indian. It consists of great, grassy plains, interspersed with forests and groves and clumps of trees, and watered by the Arkansas, the grand Canadian, the Red River, and their tributary streams. Over these fertile and verdant wastes still roam the elk, the buffalo, and the wild horse, in all their native freedom. These, in fact, are the hunting-grounds of the various tribes of the far west. Hither repair the Osage, the Creek, the Delaware, and other tribes that have linked themselves with civilization and live within the vicinity of the white settlements. Here resort, also, the Pawnees, the Comanches, and other fierce, and as yet independent tribes, the nomads of the prairies, or the inhabitants of the skirts of the Rocky Mountains. The regions I have mentioned form a debatable ground of these warring and vindictive tribes; none of them presume to erect a permanent habitation within its borders. Their hunters repair thither in numerous bodies during the season of game, throw up their transient hunting-camps, consisting of light bowers covered with bark and skins, commit sad havoc among the innumerable herds, that graze the prairies, and having loaded themselves with venison and buffalo-meat, warily retire from the dangerous neighborhood, * * * * as yet unexplored by white men"*—that it would be impossible for me, in my day, to make just another such tour of exploration as that concerning which Mr. Irving wrote so entertainingly, enjoy hunting the buffalo and the wild horse, as he is alleged to have done, and, subsequently, from the inspiring precincts of some New England literary "den," surrounded by trophies of the chase—by horn of elk and hide of bear, the stuffed counterfeits of the coyote, the beaver, the sportive little prairie-dog, and the jackass-rabbit—pour into the large and attentive ear of a self-contained and credulous community similar impressions respecting these identical "wastes." And if not, why not?

Consider, for a moment, that my ideas of the great world's progress were such as were measurable by the standard exemplified by the little world in which I lived; were such as were "taught how to shoot" during an occasional term at the "deestrik skule," under the eye and the rod of the Rev. Amaziah Greathead, of blessed memory, or gleaned from the chance publications that fell in my way. Among these latter, I recall Geography Made Easy, by Jedidiah Morse, in 1816; a copy of Mr. Joshua Billings' Almanax; two volumes

* Irving's, A Tour on the Prairies.



SLEEPING CAR INTERIOR ON THE WONDERLAND ROUTE.

DINING CAR INTERIOR ON THE WONDERLAND ROUTE.

MAMMOTH HOT SPRINGS HOTEL, YELLOWSTONE NATIONAL PARK.

of United States Patent Office Reports; The Life and Missionary Labors of Captain Kidd, and a Book of Common Prayer, of uncertain antiquity, but teeming with such intellectual pabulum as the following:—

"Grass for our cattle to devour,
He makes the growth of ev'ry field;
Herbs for man's use, of various pow'r,
That either food or physick yield."

Consider, again, that my other patron saint of American literature, Fenimore Cooper, apparently looked upon the region stretching westward from the "Father of Rivers" to the rugged peaks of the Rockies as presenting an enigma impossible of solution by the husbandman, as witness the following excerpt from his introduction to The Prairie:—

The American prairies are of two kinds. Those which lie east of the Mississippi are comparatively small, are exceedingly fertile, and always surrounded by forests. They are susceptible of cultivation, and are fast becoming settled. They abound in Ohio, Michigan, Illinois and Indiana.

The second description of these natural meadows lies west of the Mississippi, at a distance of a few hundred miles from that river, and are called the Great Prairies. They resemble the steppes of Tartary more than any other known portion of the world; being, in fact, a vast country, incapable of sustaining a dense population, in the absence of those two great necessaries—wood and water. Rivers abound, it is true; but this region is nearly destitute of brooks and the smaller water-courses which tend so much to comfort and fertility.

The origin and date of the Great American Prairies form one of nature's most majestic mysteries. The general character of the United States, of the Canadas, and of Mexico, is that of luxuriant fertility. It would be difficult to find another portion of the world, of the same extent, which has so little useless land as the inhabited parts of the American Union. Most of the mountains are arable; and even the prairies in this section of the republic are of deep alluvion. The same is true between the Rocky Mountains and the Pacific. *Between the two lies the broad belt of comparative desert which is the scene of this tale, appearing to interpose a barrier to the progress of the American people westward.*

Considering all this, and the further fact that the gray matter of my *cerebrum* and *cerebellum* was, in those days, nourished physically with whale-on-toast, and mentally with such great, hard chunks of misinformation, is it any wonder that I soon became afflicted with a well-defined and robust case of hydrocephalus, aggravated to a greater or less extent by acute mental strabismus?

Some lynx-eyed student of historic precedent—whose name and post-office address I can not, at this moment, recall—has arisen to remark, that "the fortunate demise of men often insures them statues of heroic mold."

As I write these lines, the thought occurs to me, that were I of kith or kin to the illustrious writer of fiction herein referred to, I should embrace the recurrence of next November's turkey-festival as a fitting occasion for offering

up a heartfelt pean of thanksgiving that an all-wise Providence permitted him to quit this vale of tears in 1851; at the zenith of his fame as the creator of impossible Indian characters, and self-constituted prophet. Had not the remorseless reaper gathered him in thus opportunely, he might have posed as the Indian Messiah in 1890, or been tenderly laid to rest in the bottomless pit of political oblivion, by a farmers' legislature of populous Kansas, a little later on.

Verily, "There's a divinity that shapes our ends, rough hew them as we will."

But enough of autobiography, and enough of individual criticism, gentle reader, enough! Suffice it to be said that an intimate acquaintance with "the broad belt of comparative desert extending westward from the Mississippi to the Rocky Mountains," covering a period of fifteen years, according to the Julian calendar, has been ample to convince me that, had the *lares* and *penates* of the paternal household been modeled rather more after Mr. Lemuel Gulliver of Newark, and a trifle less after the possibly well-intentioned but positively misinformed Jedidiah Morse of Massachusetts, and one James Fenimore Cooper of New York, I should have found myself, at the age of majority, better qualified to pass a creditable examination touching the physical features of North America in general, and of the fair and fruitful Basin of the Mississippi in particular.

To the poor and weary pilgrim traveling from afar—say from about as far as the stump-embossed and stone-bestrewn soil of Eastern Maine; the sand-dunes of Cape Cod (fish); the poor farms (literally) of New Hampshire and Vermont; the sterile clay-beds of Connecticut, or the Jersey Flats—a bird's-eye view, in this year of grace, and in the rosy month of June, of the vast region watered and drained, alike, by the majestic Mississippi and its numerous affluent streams, both great and small, can only be likened to a soul-inspiring glimpse of the apple-orchard of ancient Eden, in full bloom.

True, a landscape that once presented only a monotonous succession of forest and meadow, lake and river, hill and dale, has been greatly beautified by the conversion, here and there, of the rich, dark prairie loam into cultivated fields; by the erection of modern homes and neat and commodious farm-buildings; by the upbuilding of thriving villages and large centers of commerce; by the construction of railways for overland transportation, and steamboats for lake and river navigation, and the thousand and one other processes of development that tend to add warmth and animation to the picture; yet these inevitable results of American progress ought not to have escaped the imaginative eye of him who, fifty years agone, gazed upon the naked canvas, ere the limner had essayed to portray in bold outline, even, the grand and glorious picture of the future.

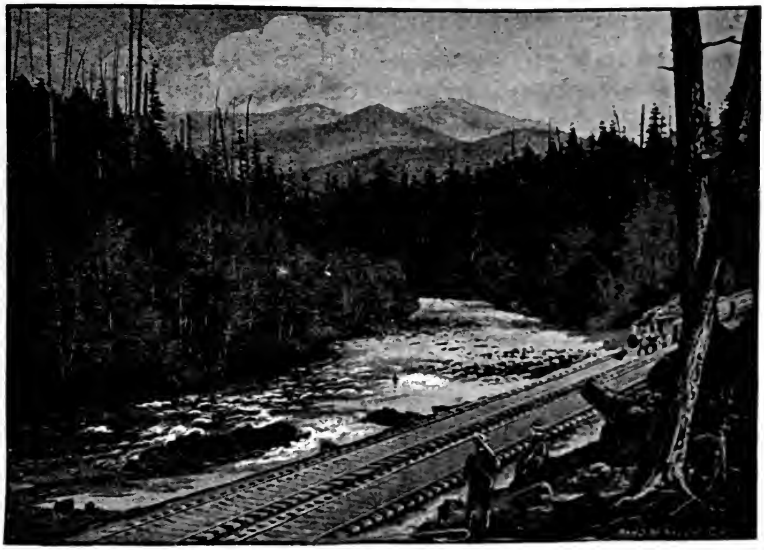
It is the purpose of the succeeding chapters of this little volume to present a type-sketch—embellished by illustration—of the dominant features of soil

and climate, diversity of resource, and scenic beauty of the vast northern belt of forest, prairie, mountain, and vale, traversed and made easily accessible by that great continental thoroughfare—the Northern Pacific Railroad—and extending from the picturesque margin of Lake Superior through Wisconsin, Minnesota, North Dakota, Montana, Idaho, Washington and Oregon—two thousand miles and more—to Puget Sound and the famed and fruitful Valley of the Willamette (Wĭl-lăm-ĕt).

With this end and aim, I shall first discuss the general topography of this extensive and remarkable region; beginning with the twin termini of the gigantic railway in question, situate upon the historic shores of the "Shining Big-sea-water," endeared to all the world by the charming legend of Hiawatha; journeying thence along the trail of the buffalo, the elk, and the "prairie-schooner,"

"To the kingdom of the West-wind,
To the portals of the Sunset;"

reserving for later narration events incident to the rambling outing already alluded to, and which was undertaken with special reference, aside from a desire to renew acquaintance with the gamy and toothsome mountain-trout, to the collecting of data and statistics relative to, and the securing of a series of landscape photographs illustrative of, the Rocky and Cascade Mountains, the Basin of the Columbia River, and the Pacific Coast.



CHAPTER II.

THE NORTHWESTERN PRAIRIE STATES—THEIR SOIL, CLIMATE, PRODUCTIONS —COMMERCE—PRINCIPAL TOWNS—HEALTH AND PLEASURE RESORTS —HUNTING AND FISHING GROUNDS.

WISCONSIN.

BY WAY of general description, it may be said that the entire surface of the State is a vast rolling plain — from 600 to 1,500 feet in altitude — varied only by bluffs along the borders of rivers and lakes, of which latter there are many, particularly in the central and northern portions. They are from one to twenty square miles in extent, usually margined by high banks of great natural beauty. As a rule, their waters are clear, cold and deep, and are well stocked with bass, pickerel, pike, muskallonge, and other varieties of game fish.

Wisconsin ranks among the first of the agricultural states of the Union, notwithstanding the fact that the greater portion of the northerly half of its area is covered with forests of pine, fir, hemlock, etc., and is as yet but sparsely settled. This forest region abounds with deer, bear, and other large game. Lumbering, the production of iron ores, and manufactures are numbered among its principal industries.

The chief agricultural productions are wheat, oats, corn, barley, rye, flax, potatoes and tobacco. The soil throughout the State is of good quality, and the climate bracing and healthful. The mean annual temperature is about 46° Fahrenheit.

ASHLAND, the eastern terminus of the Wisconsin Division of the Northern Pacific Railroad, is an important and rapidly growing town of some 13,000 population, situated at the head of charming Chequamegon Bay—one of the Great Lakes' fine harbors—sheltered from wind and wave by the Apostle Islands, of historic memory, visible in the offing.

Widespread as is the fame of Ashland, and its large and excellent Chequamegon House, as a summer resort, the rejuvenating properties of its fragrant piny woods, its trouting and boating, its merited commercial repute has been gained chiefly in connection with shipments of iron ore, for which it boasts a

record second to but one city in America. It has a blast furnace, a smelter for gold and silver bearing ores, ten saw-mills, large ore, lumber and coal docks, street railways, steel-works, and is the northern terminus of the Wisconsin Central Railroad.

The Northern Pacific has recently so far absorbed the Wisconsin Central as practically to give it a continuous "through line" from Tacoma, Seattle, Portland, and other Pacific Coast points to Chicago.

Some twenty-five miles west from Ashland, on the Wisconsin Division of the Northern Pacific, there is a pretty little lake and woodland pleasure-resort, called Pike Lake, the waters of which afford prime fishing, and the circumjacent woodlands fine shooting in the way of pheasants, and deer and larger game in season.

Eleven miles still farther west is Brule (Brū'-lĕy) Station, on the clear and impetuous Bois Brulé River—one of those excellent and romantic trout-streams for which the Lake Superior region is so justly celebrated. Game is also abundant in the almost unbroken forests surrounding Brule, a fact which gives increased interest to an otherwise commonplace "way" station. Hunting and fishing parties will here find not only exciting sport, but fair hotel accommodations, and at reasonable rates.

SUPERIOR, population 3,000; WEST SUPERIOR (situated just west of the old town of Superior, on St. Louis Bay), population 15,000, and SOUTH SUPERIOR (distant about four miles from the centers of business of each of the other two cities of the same name) are the extreme northwestern towns of the "Badger" State; and, together with Duluth, just across the state-line, in Minnesota, of which more particular mention will be made a little later on, stand as lusty examples of the remarkable commercial development, at the head of Lake Superior, which recent years have witnessed, and to the sure and certain continuation of which the finger of destiny apparently never pointed more clearly or directly than now.

That at least one giant commercial city will, in the fullness of time, possibly in the near future, crown the abrupt and rocky shores that mark the western limit of the greatest and grandest of North America's unsalted seas, even the ubiquitous "Doubting Thomas" can to-day discover slim foundation for question.

The three Superiors are so closely linked with Duluth by hourly "short-line" trains, steam-ferries, and abutting property limits, that it is difficult for a stranger to determine, with anything like certainty, when he has passed beyond the municipal boundary of one and trespassed upon the confines of either of the others—when he is amenable to the statutes and ordinances of Wisconsin, and when of her sister State.

One of the most important of West Superior's recent acquisitions is the ship-yard and plant of the McDougall Steel Barge Company, a large corpora-

tion engaged in building the already noted all-steel "whale-back" steamers and barges, originally designed for use in the enormous grain and ore carrying trade of the lakes; but destined, if recent trial voyages may be accepted as demonstrating their superior seaworthiness, to revolutionize ocean commerce as well.

MINNESOTA.

Lying nearly at the geographical center of North America, as it does, and occupying the most elevated plateau between the Mexican Gulf and Hudson Bay, Minnesota forms the water-shed of three great continental river systems, those of the Mississippi, the St. Lawrence, and the Red River of the North. A group of low hills in the northeastern portion of the State, called Hauteurs des Terres (Heights of Land), forms the dividing ridge between the waters of streams tributary to the Mississippi system and those which flow into Lake Superior, and ultimately into the Atlantic by way of the River St. Lawrence. A prominent spur extends south from the Itasca crest of the Mississippi for a distance of perhaps 150 miles, known as the Leaf Mountains, and the Coteau du Grand Bois of Nicollet, and forms a low dividing ridge between the waters of the Mississippi and those of the Red River.

Speaking generally, the surface of Minnesota is a gently undulating plain, with an average elevation of about 1,000 feet above sea-level. Considered with more reference to topographical detail, it presents the appearance of a succession of small, rolling prairies, dotted and gemmed with shady groves and sparkling lakes, and alternating with belts of heavy forest growth.

Its southern and central portions consist, chiefly, of rolling prairies, the northerly margin of which is traversed by a belt of hard-wood forest—known as the Big Woods—containing from 4,000 to 5,000 square miles. Then come more stretches of prairie, and lakes become more numerous. Northward from the forty-seventh parallel of latitude, the great pine region stretches away from Lake Superior waters on the east to the confines of the grass-carpeted Valley of the Red River on the west, embracing the headwaters of the Mississippi and its numerous tributary streams—an estimated area of upward of 20,000 square miles.

Lakes and Lake Resorts.—Minnesota is famed for the number and beauty of its lakes, of which there are within its boundaries anywhere from 7,000 to 10,000, according to varying estimates given by recognized authorities upon the subject. They range from one mile to thirty miles in diameter, and several have an area of from 100 to 400 square miles. The greater number are exceedingly picturesque in their surroundings. Primeval forests skirt their shores, which are, except here and there in isolated cases, strewn with pebbles, among which numerous and oftentimes remarkably pretty cornelians are found.

The waters of all are clear, cool and healthful, and, as a rule, abound in various kinds of food and game fish. A number of Minnesota's lakes have gained a merited and world-wide reputation as delightful summer resorts and places of health-renewing recreation. Lakes Minnetonka and White Bear, situated within a few miles of the cities of Minneapolis and St. Paul, are especially popular resorts of this kind.

FAUNA AND FLORA. — Minnesota's fauna and flora present no marked differences from those of other States in the same latitude. Among its game and fur-bearing animals are the elk, deer, moose, caribou, bear, otter, mink, muskrat, marten, raccoon and wolf; while among the native game birds pinnated grouse (prairie chickens) and ruffed grouse (partridges, sometimes locally termed pheasants) are numerous, and afford excellent and unlimited sport in season.

SCENERY.—Although Minnesota is destitute of scenery that may be strictly classed as grand, not a little of its landscape is characterized by a certain picturesque beauty and an exquisitely rich coloring, particularly in the full leaf and bloom of summer or in the golden autumn time, such as few prairie states may boast. Notable, in this respect, are the high, rounded bluffs that flank either margin of the Mississippi, from the Falls of Minnehaha southward.

MINERALS. — Copper and iron ores abound in the northeastern part of the State, along the north shore of Lake Superior and in the vicinity of Vermillion Lake.

BUILDING-STONES.—Extensive strata of building-stones, of excellent quality and of varying kinds, underlie parts of Minnesota in such close proximity to the surface as to render quarrying both practical and easy. Noteworthy among these are the Trenton limestone of St. Paul and vicinity, the gray granite quarried at St. Cloud, and two particularly handsome strata of lower magnesian limestone — the pink-tinted stone found and quarried near Mankato, and universally known as Kasota stone, and a cream-colored variety found at Red Wing.

SOIL AND PRODUCTIONS.—The character of the surface soil varies in different parts of the State with the character of the underlying strata. It is, as a general thing, very fertile, and wears remarkably well, some fields having been cultivated to crops for thirty or more consecutive seasons. About three-fourths its entire area is susceptible of cultivation, much of which, especially in the northerly and northwesterly portions, is as yet unsettled — awaiting only the coming of the tiller of the soil to make it crop-producing. There are at least 15,000,000 acres of good farming-land in Minnesota yet unoccupied.

The principal agricultural productions are wheat, oats, corn, rye, flax, barley, buckwheat, sorghum, potatoes and hay. The hardy varieties of fruits and berries yield well, and are profitably raised. Grapes and tobacco are also raised to some extent. Hundreds of bushels of wild plums, gooseberries,

raspberries, and blueberries are annually gathered, and readily find an active home market.

Dairying and poultry-raising are quite general, and where attended with care, pay well.

Sheep, cattle, and horses are also reared to a considerable extent, and, as a general thing, with success and profit.

THE LEADING INDUSTRIES are agriculture, lumbering, mining, and manufactures. Minnesota's repute as a manufacturing state had its inception in, and for years was maintained by, the grinding of wheat into flour; but, of late years, other manufacturing enterprises have sprung from the soil, or been attracted to her borders, to such an extent that the Eleventh Census assigns her noteworthy rank in this respect.

EDUCATION.— Minnesota's educational facilities are unsurpassed; and regard for "The Little Red School-house" is as firmly rooted in the hearts of her people, of all classes, as love of free homes and firesides and the dear old emblem of liberty itself.

CLIMATE.— Minnesota lies so far north as to have a low mean annual temperature, and so far inland as to have the characteristic continental climate. Its elevation above sea-level gives an agreeable rarefaction to the atmosphere, and makes the prevalence of fogs and damp weather unknown. Between June and January there is an annual variation from the summer heat of Southern Ohio to the winter cold of Montreal. The winter, usually commencing in November and continuing till near the end of March, is not a period of intense continued cold, but is subject to considerable variations. As a rule, the comparative dryness of the atmosphere neutralizes the severest effect of excessive cold. The snowfall is extremely light during most of the winter, but as spring approaches precipitation becomes greater, and there are, frequently, heavy snowfalls in February and March. The change from winter to summer is rapid, vegetation sometimes seeming to leap into full and active growth within the space of a few weeks. The summer months bring days of intense heat, but, with comparatively rare exceptions, the nights are delightfully cool. Hot days and cool nights make the ideal weather for a good wheat crop; and the forcing heats of summer produce in luxuriant growth the vegetable life which belongs to the Middle States. The average temperature for the hottest week in summer is from 85° to 90°, and for the coldest week in winter is from 10° to 20° below zero. Observations conducted at St. Paul, extending over a period of more than thirty-five years, show the following mean temperatures: Spring, 45.6°; summer, 70.6°; autumn, 40.9°; winter, 16.1°; average, 44.6°. The average annual rainfall is about 25.5 inches. While this is not large, it is so distributed as best to subserve the purposes of vegetable growth. No moisture is lost in superfluous spring and autumn rains, or in the cold or non-producing part of the year; the precipitation, which in

"OLD FAITHFUL."

ON YELLOWSTONE LAKE.

winter is less than two inches, increasing in summer to twelve inches. To the season of vegetable growth belong 70 per cent. of the yearly measures of heat and 76 per cent. of the rainfall.

The causes which mitigate the actual severity of the climate as felt, which produce so large a number of clear, crisp days, and which forbid the continued presence of a large amount of moisture in the atmosphere, are those which render a climate healthful in the highest degree.

DULUTH, population about 40,000, situated at the head of Lake Superior, is the county seat of St. Louis County, and the eastern terminus of the East Minnesota Division of the Northern Pacific Railroad. Six other lines of railway enter the city, making it an important railway center. It has twelve banks, with a combined capital of over $2,000,000; sixteen large grain elevators, with a combined capacity of about 21,000,000 bushels; a very extensive and complete system of docks, a blast-furnace, car works, foundries, and machine shops, saw-mills, flouring-mills, two morning, two evening, and twelve weekly newspapers, two handsome opera-houses, a union railway depot erected in 1891, at a cost of $325,000, and a complete system of water and gas mains and electric street railways. Every branch of commercial industry is here represented; and receipts and shipments of grain, coal, lumber, oil, salt, ores, and fish are simply enormous. The combined capacity of grain elevators alone, in Duluth and West Superior, is sufficient to provide winter storage for 30,000,000 bushels of grain.

Fine trout-fishing and hunting are to be had within easy reach of the city.

BRAINERD, the county seat of Crow Wing County, and a growing city of 7,000 population, is located upon the east bank of the Upper Mississippi, in the midst of a forest of pine. It is the junction point of the Northern Pacific Line running to St. Paul by way of Little Falls and the line running to Duluth direct, from which latter city it is distant 110 miles. The road from Duluth to Brainerd passes, for the greater part of the way, through forests of pine and hardwood timber, interspersed with stretches of prairie and strips of meadow, with here and there a sylvan lake or stream to tempt the angler. This entire region affords good hunting and fishing.

DEERWOOD, seventeen miles east of Brainerd, is regarded by sportsmen as a particularly favorite locality. It is immediately surrounded by small, crystal lakes well stocked with bass, pike, pickerel, etc., that afford wielders of the rod excellent sport; and ducks, ruffed grouse, and deer are to be had in season. Visitors are assured good hotel accommodations and boating, no pains being spared to make their stay pleasant in all respects. A number of city-dwellers, who enjoy the quiet and rural comforts of a lake and woodland retreat, boasting less of fashion than of the fresh beauty of nature, have erected pretty cottages for summer occupancy at Deerwood.

AITKIN (ten miles farther east) is also a Mississippi River town, and the natural center of quite an extensive farming and lumbering region. Steamboats make regular trips in summer from this point to Grand Rapids, sixty-five miles north.

The distance from Brainerd to St. Paul by rail is 138 miles; the entire route lying through a pleasant and well-settled agricultural section, with here and there manufacturing centers of not a little importance—the outgrowth of vast lumbering and wheat-milling interests.

ST. PAUL is one of the handsomest and most substantially built cities on the American Continent. It is, in very truth, founded upon a rock, as the underlying strata of limestone amply attest. Situated at the head of practical navigation on the Mississippi, this beautiful and healthful city covers an area of 35,482 acres, lying in the form, in rough outline, of a semicircular amphitheatre, or succession of steep, rolling terraces, breaking here and there into bold, rocky bluffs of sufficient height to afford a commanding and comprehensive view, not only of the city itself, but of the broad river at its feet, the picturesque bluffs which stretch away to the southeast, and those which are crowned by the frowning battlements of historic old Fort Snelling, five miles farther up the majestic river.

The business portion of the city is confined principally to the lower terraces near, or at all events not very remote from, the river front; while the higher "benches", that rise above this older part of the town, are the favorite residence districts. Famed as is this city of the great and growing Northwest for its business enterprise, its wealth, its public schools, libraries, charitable institutions, its parks and public works, and the universal large-heartedness of its citizens; its crowning glory is the general air of taste, refinement, and comfort which pervades its homes; not the stately dwellings that rise in the most select districts merely, but the homes of men of modest income as well.

But it is not the purpose of the writer to pay more than a passing tribute to cities such as St. Paul and Minneapolis, concerning whose prosperity and commercial importance no portion of the civilized world requires enlightenment. Suffice it to be said that both the cities named are metropolitan in all that that term implies. Each has a population of not far from 200,000; and in many respects their interests are identical. St. Paul is practically the eastern terminus of the Northern Pacific, though its trains run through to and from Chicago direct and without change over the Wisconsin Central Line, as already stated.

MINNEAPOLIS.—To dismiss this city with the meager statements just made regarding its population and commercial importance, would be but an act of gross injustice to the reader, more so than to the city whose marvelous mills have borne the name of Minnesota into more households, both at home and abroad, than any other one agency in the State. Pretty much everything that has been said regarding St. Paul may be, with equal accuracy, applied to Min-

neapolis, though the location of the latter is more level, and its streets and avenues laid out with greater regularity in consequence.

Here are the largest flouring-mills in the world, the Pillsbury "A" and the Washburn "A" mills, their combined daily capacity being 11,350 barrels. The daily capacity of the city's twenty-four flouring-mills is 37,850 barrels, and the total number of barrels of flour manufactured by these mills during the year just closed was between 6,000,000, and 7,000,000. The grain storage capacity of Minneapolis is about 20,000,000 bushels.

Ranking next in importance to flour is the lumber manufacture of this great city; about 300,000,000 feet being the annual cut. The logs that are thus converted into lumber, sash, doors, blinds, etc., are floated down the Mississippi and its tributaries from the northern pineries. The immense water-power that is utilized by the ingenuity of man to accomplish these astounding results represents about 50,000 horse-power.

The cities of Minneapolis and St. Paul together form the marvel of the Northwest. They lie but ten miles apart, and, so far as distance is concerned, are to all intents and purposes one city — the means of transportation between them being as available as are the street railways of either city. Each is justly proud of its public schools, and the thousand or more students, male and female who annually receive instruction — tuition free — at the University of Minnesota have just reason to be proud of the State of their nativity. Hamline University is another of the higher institutions of learning with which the State is blessed.

Fort Snelling and the near-by Falls of Minnehaha—both points of historic interest and not a little beauty—attract many visitors. The time was when Fort Snelling was recognized as one of the most important of Western military posts; but it is many years since its strong granite walls and deep-mouthed cannon have been considered as necessary factors in the maintenance of the tranquillity and dignity of the great commonwealth. Of late years, it has been the recruiting station and army headquarters of the Department of the Northwest.

ANOKA, population 5,000, ST. CLOUD, population 10,000, and LITTLE FALLS, population 3,000, distant from St. Paul 29, 76, and 108 miles, respectively, are manufacturing towns of some importance on the line of the Northern Pacific. All three are located on the banks of the Mississippi, and enjoy more or less extensive water-power privileges. They are surrounded by a fine agricultural region, and are largely engaged in the milling of wheat and lumber. Besides other interests, St. Cloud has twenty-three granite quarries whose product ranks high among builders, and commands a ready market. Little Falls is the junction of the branch line running to Morris, Minn., eighty-eight miles, and of the "cut-off" running to STAPLES, on the main line, thirty miles west of Brainerd. Both of these branches traverse districts rich in timber and agricult-

ure, the principal products being wheat and other small grains, lumber, railroad ties, and cord-wood.

WADENA, the county seat of Wadena County, population about 1,500, is another of the milling and agricultural towns on the main line. It is seventeen miles west of Staples, and forms the junction point of the main line with the Northern Pacific, Fergus Falls and Black Hills Branch, running southwesterly — 119 miles — to Milnor, N. Dak. This branch also runs through a rich farming country.

PERHAM and DETROIT, stations on the main line west of Wadena, the former in Otter Tail County and the latter the county seat of Becker County, are quite important towns, not only in a commercial sense, but as popular local resorts for sportsmen and those seeking recreation generally. They are situated in the midst of a section so famous for the number and beauty of its lakes as to have long ago received the distinct appellation of "The Lake Park Region of Minnesota." Hundreds of lakes, some of fair size, others small, dot the landscape for many miles around, here shimmering in the sunlight of the open prairie, there reflecting the dark shadows of pine, spruce and hemlock; one and all plentifully stocked with gamy bass, pike, pickerel and muskallonge. Myriads of migratory wild ducks and geese halt among these lakes in their spring and autumn flights, affording excellent "pass" shooting; while the prairie chicken shooting of September and October, and the partridge and deer hunting of November and December, add to the pleasures of the sportsman.

Lake Detroit, one of the lakes under discussion — and in the immediate vicinity of which the station (Detroit) is located — is quite a large body of water, having a shore-line of thirty-seven miles, most of which is densely wooded. Excursion steamers and sail and row-boats navigate its placid waters, and summering cottages grace its clean, sandy shores. The Hotel Minnesota, a fine, large hotel near the lake-shore, is well adapted to meet the requirements of tourist-travel.

At WINNIPEG JUNCTION, twenty-one miles farther west, the Manitoba Division of the Northern Pacific diverges from the main line. This division extends 257 miles to the north, through an agricultural region of great fertility, to Winnipeg, in the Province of Manitoba. Crookston and Red Lake Falls, in Minnesota; Grand Forks, Grafton, Drayton, and Pembina, in North Dakota, and Morris, Brandon, Portage la Prairie, and Winnipeg are the important towns on this line.

MOORHEAD, opposite Fargo, at the Red River "Crossing," is the last station on the main line in Minnesota. It is the county seat of Clay County; is located in an excellent farming district, and, in common with Fargo, is the head of practical navigation on the Red River, which forms the boundary-line between Minnesota and North Dakota. Moorhead has a population of some 4,000, and possesses exceptionally fine educational advantages. Besides its excellent

public schools, it has a State normal school, an Episcopal college and training-school for boys, and a Swedish academy.

NORTH DAKOTA

Is one of the most interesting of the prairie states, whether considered from a geological or agricultural point of view. It is a great, grassy, rolling plain, destitute of timber, save along the margin of lakes and streams — with both of which it is well supplied — and with general outline broken but slightly by hills. True, the extreme northern boundary, from the western verge of the Valley of the Red River to that of the *Souris* or Mouse River, is formed of fairly high rolling hills, known as the Pembina and Turtle Mountains — the latter quite heavily timbered. Then, too, there are elevated ridges and small plateaus surrounding the east and south shores of Devil's Lake, and a long stretch of high rolling land extending from the extreme northwestern corner of the State, in a southeasterly direction — following, in general trend, the course of the Missouri — to and across its southern boundary. This elevated plateau is designated by geographers as the *Coteau du Missouri* (Highland of the Missouri), but is usually referred to by Dakotans — North and South — as "The Coteaus."

That portion of the State lying west of the Missouri is much more rolling and "broken" than the section to the east of the river, and terminates—in the extreme western part—in a group of fantastically formed and, in some cases, highly colored clayey hills, to which early French trappers gave the characteristic appellation *Mauvaises Terres* (Bad Lands), a misnomer that has since clung to the region.

The average elevation of the State is but little, if any, greater than that of Minnesota, and the statements already made in these pages regarding the climate of the latter apply equally well to North Dakota.

One unacquainted with the West would naturally enough, perhaps, be led to suppose that the absence of trees would result in making these plains a sterile desert waste; but, on the contrary, no part of the known world possesses a soil of such phenomenal fertility—not even the Valley of the Nile. Like the wide-rolling "pampas" of South America, the prairies of this new North State, carpeted with the richest and most nutritious of native grasses, were only a few brief years since the home and grazing-ground of roving bison countless in number as the yellow daisies that nodded in the breeze. To-day, these same prairies constitute one vast wheat, cattle and sheep ranch; and when its tens of thousands of quarter-sections of arable land—yet untenanted—are settled, and all its bountiful acres brought under the plow, or pastured to flocks and herds, the world will gaze in wonder and admiration upon the grandest agricultural commonwealth in its history.

Soil and Productions.—The surface soil all over the State is composed of from two to four feet of black loam—in localities slightly mixed with a very fine sand. Below this is a heavy clay marl of great depth. There are very few underlying strata of rock; in fact, there are almost no rocks at all in the State, either on or under the surface, except an occasional deposit of smooth bowlders of granite or limestone formation brought here and stranded during the glacial period. It is very evident that the soil is the result of the washing down and depositing of the loose, earthy matter and vegetation of higher altitudes, as trunks of trees and the plant-life of past ages are encountered by well-diggers at depths ranging from ten to ninety feet. It would seem, also, that the State, or portions of it, at all events, must have at some time in the past been an ocean-bed, as the soil is strongly impregnated with the sulphates of soda, lime, and magnesia, carbonate of lime, and common salt. These properties give the soil-waters a brackish, alkaline taste; and, in the case of Devil's Lake—an irregular sheet of water forty miles in length by three to ten miles in width—and a smaller body of water near by, called Stump Lake, have so far impregnated their waters as to render them unfit for drinking.

That the soil will prove inexhaustible is easily shown by the fact that when the surface soil becomes worn and unproductive, if it ever does, subsoil-plowing will restore its original vigor by bringing to the air and mixing with the depleted and impoverished loam sufficient quantities of vegetable salts to refertilize it.

Both the soil and climate of North Dakota are peculiarly adapted to the production of the finest quality of wheat ever known to man, and which has acquired world-wide repute as "North Dakota No. 1 Hard Wheat."

This wheat is conceded to be so superior to all other grades, that it regularly commands a "fancy" price in the markets; and the demand will doubtless always exceed the supply, owing to the limited area adapted to its production.

Cost of Growing Wheat.— Nowhere in the United States can wheat be grown so cheaply as upon the prairies of North Dakota, where there is neither stump nor stone to interfere with the labors of the farm, and no side-hills to climb. Careful estimates extending over a period of ten years place the cost of raising this cereal at not to exceed 24 cents a bushel upon large farms supplied with modern machinery, and from that to 40 cents upon smaller farms. This estimate not only covers the labor, but cost of seed and re-plowing the land. Eighteen bushels an acre is an average yield under fairly favorable conditions; and, one year with another, 75 cents a bushel, net, can be realized from this crop. Barley, oats, rye and flax are also profitable crops; while potatoes, onions, and every vegetable common to the Northern States yield bountiful crops at a minimum of cost to the grower. Potatoes may be grown at a net cost of 10 cents a bushel, and find a ready market at prices ranging from 30 cents to $1 a bushel. The yield runs from 100 to 300 bushels an acre,

according to the season and the care given the plants. In some instances 400 bushels of sound, merchantable potatoes have been gathered from an acre of ground devoted to their culture.

Wild prairie hay, of better quality and far more nutritious than timothy, can be put in the stack at $1 a ton, and requires no shelter.

Winter and Snowfall.— The ground freezes sufficiently to stop fall plowing about November 10, and rarely thaws enough to admit of the beginning of spring farming operations earlier than March 20. During this period, clear, sunshiny days follow one another almost continuously, and the dry, bracing air lends a stimulus to one's energies truly astonishing. During the months of December, January and February, the thermometer often marks 20° below zero, and once in a great while 30° and even 40° below. These extremes of cold appear to create an absolute calm, and so dry is the atmosphere and so little the inconvenience experienced, that it is difficult to realize the extent of mercurial contraction. This cold is not of the penetrating sort as a rule, and it is often asserted, by persons competent to speak authoritatively, that less actual discomfort is felt in North Dakota with the thermometer indicating 25° below zero than in the damp atmosphere of the Atlantic seaboard with the mercury at 8° or 10° below.

The snowfall of the entire prairie region is very light north of the forty-sixth parallel, as compared with that of the region extending northward 300 miles or more from the latitude of Chicago; and travel by rail or otherwise is seldom interrupted in consequence.

In North Dakota very little snow falls prior to January 1, and cattle, horses, and sheep may be daily seen grazing in the fields. Young stock, especially, require little or no feeding until along in February, and by the middle of March are again turned out to shift for themselves.

Fencing.—Farms are not required to be fenced in this State; a fact that annually effects a great saving to the wheat-grower. A herd-law prohibits the running at large of stock in grain-growing districts, and in localities where sheep and stock-raising has come to be the leading industry, there are no wheat-farmers to be bothered by stock.

Fuel Supply.—Although to a great extent destitute of timber, North Dakota is underlaid, in several sections of the State, by immense beds of lignite coal of excellent quality, and in quantity sufficient to supply the needs of a dense population. This coal lies near the surface, and is easily and cheaply mined. Then, too, the extensive forests of Minnesota, whence cord-wood and lumber are obtained, are at the very threshold of North Dakota, requiring but small cost of transportation.

The Famed Red River Valley is 300 miles in length by about 60 miles in width, and is not a deep valley surrounded by hills, but a slight depression merely in a comparatively level prairie region. To the eye, it is as flat and

smooth as a ball-room floor, but it has, in fact, a sufficient slope to effect natural drainage. The valleys of the Sheyenne, James, and Missouri rivers are quite deep bottom-lands flanked by bold, picturesque bluffs.

FREE HOMES.—North Dakota is one of the few remaining States of the Union in which there is anything like a considerable area of public land yet subject to settlement under the homestead laws of the United States—practically a free gift of 160 acres to every farmer desiring a home in the West and yet without the means to purchase it.

EDUCATION.—For so young a State, North Dakota has made giant strides in the cause of popular education. Her common schools rank among the best, and she has endowed a university at Grand Forks, an agricultural college at Fargo, normal schools at Valley City and Mayville, an industrial school at Ellendale, and a scientific school at Wahpeton.

The Northern Pacific Railroad traverses the State from Fargo on the eastern to Sentinel Butte on the western boundary—about 400 miles—besides which it operates 500 miles or more of branch lines within the State. The main line passes through the cities of Fargo, Casselton, Valley City, Jamestown, Bismarck, (the capital), Mandan and Dickinson.

The Fargo & Southwestern Branch runs from Fargo, 110 miles, to Sheldon, Lisbon, La Moure and Edgeley.

The Jamestown & Northern Branch runs from Jamestown north to Carrington, New Rockford, Minnewaukan, and Leeds—108 miles. Another branch runs from Jamestown south to Grand Rapids, La Moure, and Oakes—sixty-nine miles; still another from Sanborn, on the main line, in Barnes County, to Cooperstown, in Griggs County—thirty-six miles; while the Manitoba Division and the Black Hills Branch enter the State at Grand Forks and Wahpeton, respectively.

The huge steel bridge built by the Northern Pacific across the Missouri River between Bismarck and Mandan, in 1881, is, including approaches, about 3,000 feet in length, and cost upward of a million dollars. It is universally regarded as a fine piece of engineering skill.

Among the high, rolling bluffs on the west side of the river, south of Mandan, are to be found the remains of a prehistoric race. Specimens of pottery of excellent handiwork and exquisite decoration have been unearthed, besides many other relics of much interest.

GAME.—Although the buffalo has disappeared from these, his accustomed haunts, deer and antelope are still to be found; and prairie chickens, ducks, geese, brant, and sand-hill cranes flock to the lakes and wheat-fields of North Dakota in such unusual numbers as to astonish every sportsman who takes his autumnal outing on the prairies of this northern-border State, than which no state, east or west, north or south, offers so fine a field to the wing-shot.

TICKET AGENTS' YELLOWSTONE PARK SPECIAL, LIVINGSTON, MONT.

HOTEL BROADWATER, HELENA, ON N. P. R. R.

CHAPTER III.

MOUNTAIN REGIONS OF THE NORTHWEST—FERTILE VALLEYS—HEALTHFUL CLIMATE—SCENIC GRANDEUR AND HIDDEN MINERAL WEALTH—THE GREAT BASIN OF THE COLUMBIA—FARMING AND STOCK-RAISING—THE PACIFIC SLOPE—ITS ORCHARDS AND HOP-YARDS—FORESTS AND HARBORS—COMMERCE AND RESOURCES.

MONTANA.

THE third of the quartet of Territories to enter the Union in 1888, is, next after Texas and California, the largest of the states, being 500 miles in average length from east to west by 275 miles in average width from north to south. Expressed in square miles, its area figures up into the hundred thousands (145,776), and its acreage ninety-three and a quarter millions.

Topographically, Montana may be separated into two natural divisions—mountain and plain, western and eastern.

THE EASTERN PORTION consists of high, rolling plains, broken at intervals by groups of low hills, and valleys of greater or less depth that mark the trend of water-courses.

This region embraces about three-fifths of the State's entire area, and affords almost unlimited pasturage for flocks and herds. It extends from the eastern boundary, where the general altitude is about 2,000 feet above sea-level, in a nearly uniform rise westward for a distance of 300 miles or more to the base of the Rockies, where it reaches double that elevation.

THE WESTERN PORTION is mountainous, the main chain and divergent spurs of the Rocky Mountains traversing it from northwest to southeast. One of the largest of these diverging spurs is the Bitter Root Range, between which on the west and the main chain on the east is a vast basin, occupying almost the whole of the northwestern segment of the State, and embracing nearly 20,000,000 acres of cultivable land. This basin is well watered by dashing mountain streams of clear, cold water—the habitat of the mountain trout—and interspersed with numerous small valleys of great fertility. Located in the eastern-central portion of this basin is Flathead Lake, thirty miles in length by from ten to fifteen miles in width, its limpid blue waters and dark setting of

pine-clad mountains, here and there lifting a snow-capped peak above timber-line, giving it a merited reputation as one of the most picturesque of the many fine bits of scenery which lend so much of the charming to the entire State.

THE CLIMATE OF MONTANA is dry, bracing and healthful. The thermometer rarely rises above 80° in summer and as rarely falls to 10° below zero in winter. Much snow falls upon the mountains, though upon the rolling plains to the eastward sufficient snow seldom accumulates to prevent the grazing of the numerous bands of horses, cattle, and sheep to whose rearing, more than to agriculture, that section is devoted. Taken altogether, it would be difficult indeed to find a climate better adapted to pursuits requiring a great deal of open-air life, or more pleasing in its effects upon persons whose systems need that general toning up which the pure, dry ozone of Montana seldom fails of bringing about.

THE LEADING INDUSTRIES OF THE STATE are, first, MINING; second, STOCK-RAISING; and third, AGRICULTURE. Under the head of mining is included the milling and smelting of ores, and the term stock-raising is intended to include the rearing of sheep and horses, as well as beeves.

Both placer and rock-mining are largely engaged in, in various parts of Montana, and new "camps" spring into existence and notoriety with each discovery.

Fifty million dollars is not an extravagant estimate to place upon the value of the gold, silver, copper, and lead annually produced by the phenomenal mines of this State, and the golden caverns of the mountains have as yet been scarce "prospected."

Brief mention of the methods employed by the placer-miner to sift out the coveted nuggets of yellow gold from the sands of river-bars or the dry, gravelly beds of ancient water-courses, together with the latest and most approved methods of ore-mining and reduction, and the elimination of metallic gold, silver, copper, and lead from their mineral compounds, will be made later on.

STOCK-RAISING.—Montana stands unexcelled as a grazing region. The rolling plains stretching eastward from the mountainous portions of the State, though for the most part destitute of forest-growth, and having the casual appearance of a well-nigh barren waste, adapted to the production of little if anything else than moldy-colored sage-bushes and spiny clusters of prickly pears—a species of dwarf cactus—as a matter of fact are annually clothed, not only in the valleys, but upon the "bench-lands" and "foot-hills," and even upon the mountain-slopes, with a growth of short but wonderfully nutritious "bunch-grass," whose succulent blades begin to grow in early spring, before the frost has fairly left the lightish-brown, sandy soil, rapidly mature, cure early in autumn, and stand as hay of the finest quality for the winter sustenance of grazing herds. Cattle fatten more quickly and keep in better

condition upon this grass than those which are pastured upon the plains of Nebraska or Colorado, or even in the "Blue-grass Region" of Kentucky. There seems to be here, also, a happy blending of pure, dry air, wholesome water, dry soil, sunshine to bask in, and shade to recline in, hill-sides to climb, and long, level stretches to race upon, necessary to the development of speed, "bottom," and perfection in the horse, and heavy fleeces of sound, soft wool and fat, juicy mutton in the sheep, possible to find in no other climate and in but few other sections of North America.

Statistics place the wool-clip of Montana at 8,393,390 pounds for the year 1890; the number of sheep at 1,347,753, cattle at 621,730, and horses at 161,311. Reports for 1891 are not at hand, but will probably show a slight increase over above figures, except in the case of wool and sheep, which are expected to show an increase of from 30 to 50 per cent.

Soil and Productions.—In portions of Montana, the soil is deep, rich, and unusually productive; in other portions it is both scanty, such as it is, and poor enough what there is of it. East of the mountains, except in a few localities, irrigation is a necessary incident to production, without which scarce anything, other than short native grasses, will grow and mature. With irrigation, almost anything in the way of grain, vegetables, berries, and hardy fruits may be grown. Beyond the mountains the soil is better adapted by nature to farming pursuits, and the climate more humid and propitious. The difference in climatic condition is due to westerly winds—"Chinook winds," as they are called—wafting the warm Japan current eastward to the main chain of the mountains, and even beyond, to the North Dakota prairies; though much of the warmth and humidity of these atmospheric currents is lost by contact with the snow and ice of mountain barriers.

The valleys of the Kootenai, Flathead, Missoula, Bitter Root, Deer Lodge, Lo Lo, Jocko, and Clark Fork bottoms, in the northwestern basin, and the Prickly Pear, Smith, Sun, Gallatin, Madison, Jefferson, and Upper Yellowstone, in the central portion of the State, east of the "divide," are some of the more noted agricultural districts. In the former, grains, vegetables, and fruits may be readily grown the same as in North Dakota or Minnesota. East of the mountains the annual fall of rain and snow decreases, and irrigation to a greater or less extent becomes necessary. The basin beyond the mountains is also pretty well timbered, as might naturally be expected, from the fact that forest-growth usually follows rainfall.

Mineral Springs and Health-Resorts.—Besides the numerous and widely known mineral springs of the Yellowstone National Park, of which more extended mention will be made in a chapter devoted exclusively to matters descriptive of that region of marvels, the Hunter's Hot Springs, near Springdale, just east of Livingston, in the Yellowstone Valley; the Ferris Hot Springs, near Bozeman, in the Gallatin Valley; the White Sulphur

SPRINGS of the Smith Valley, northeast of Townsend, on the Northern Pacific Railroad; the BOULDER HOT SPRINGS in Jefferson County; the PIPESTONE SPRINGS, on the "Butte Air Line;" the HELENA HOT SPRINGS, and others of a somewhat similar nature, not far from Missoula, are rapidly attaining prominence as watering-places possessing merit equal, if not superior, to the Hot Springs of Arkansas in the way of medicinal properties, particularly in the case of scrofulous and rheumatic diseases.

HUNTING AND FISHING.—No state in all this broad land affords such princely sport with either rod or rifle as does Montana. Nearly every one of its numerous streams and charming lakes is well stocked with mountain-trout, and grayling are found in several localities. Grouse, sage-hens, ducks, geese, brant, and swans are numerous in autumn; and grizzly bears, deer, elks, caribou, antelopes, moose, mountain sheep and goats, and mountain lions are to be had the year round.

Through this exceedingly picturesque region, comprising noble mountain ranges, beautiful valleys, great, rolling plains, and magnificent rivers, the Northern Pacific Railroad runs in a southeast to northwest direction for a distance of about 800 miles, and operates numerous branch roads reaching almost every fertile valley and productive mining-camp in the State.

NORTHERN IDAHO.

The northern part, or "panhandle," of the new State of Idaho is a region of lofty mountain ranges and narrow valleys; of beautiful and picturesque lakes and forests of valuable timber. Its chief wealth is to be found in its inexhaustible mines of lead, silver and gold; though its fertile vales are being rapidly settled, and are fast becoming the homes of prosperous ranchmen. Lakes Pend d'Oreille (Pŏn-dē-rāy′) and Cœur d'Alene (Kōr-dē-lāne′), two of America's loveliest lakes, here lie surrounded by frowning mountains, whose snowy peaks are reflected in their clear, blue depths. Both these lakes are quite large and deep; abound with trout and other fish, and are fast becoming popular as resorts for pleasure and recreation. The main line of the Northern Pacific skirts along the northerly shore of Lake Pend d'Oreille for a distance of several miles, affording a charming view of its island-dotted bosom. The best farming districts lie adjacent to and along the western boundary, and are traversed by the Northern Pacific, a branch of which likewise runs through the rich Cœur d'Alene mining district, leaving the main line at De Smet, Mont., and rejoining it near Spokane, Wash. The feature of this line, aside from mining interests, is the delightful boat-ride from Mission on the Cœur d'Alene River and Lake to Cœur d'Alene City.

This region, in fact the entire State, offers an attractive field for mining enterprise and mining capital. In the extreme northern portion of the State,

there is another charming lake—Lake Kaniksu—surrounded by mountains of untold mineral wealth, rendered accessible by the advent of this great continental railroad, and rapidly attracting the notice of the miner and sportsman.

All lakes and streams teem with trout and other food and game fish, and small steamers ply upon the navigable waters of the Snake River and upon Lakes Cœur d'Alene and Pend d'Oreille.

WASHINGTON.

Partially explored by Lewis and Clarke in 1805; linked with the fortunes of John Jacob Astor in 1810, and during a subsequent decade; the theatre of a rich fur trade in 1830, and the well-nigh *casus belli* of the "54° 40′ or fight" enthusiasts of 1845, this grand domain in 1880 possessed but 75,000 inhabitants; while the census of 1890 accredits it with a population of some 360,000 active, intelligent, progressive citizens, severally and unitedly engaged in upbuilding its cities, developing its vast natural resources of mine and forest, and tilling its fruitful soil.

Such, in brief outline, is the history and present status of the forty-second State admitted to the American Union, toward whose ocean-washed shores the Star of Empire beckons the home-seeker and the husbandman, the tradesman and mechanic, the dairyman and the orchardist, the miner and the lumberman, and the push and progressive intelligence of the world.

By way of general description, the State may be said to be 340 miles in length from east to west and 240 miles in width from north to south, extending from the international boundary to the Columbia River; its total area being about 45,000,000 acres, of which one-third is covered by forest, another 15,000,000 acres adapted to cultivation, and the remainder made up of grazing-lands, mineral lands, lakes, rivers, bays, etc.

The Cascade Range of the Sierra Nevada Mountains, which traverses the western portion of the State in a nearly direct line from north to south—with an average elevation of 6,000 feet—forms a giant barrier between the eastern and western segments of the commonwealth, and exerts a curious and potent influence upon the climate, productiveness, and general aspect of either section.

Covering both slopes of the Cascades, and extending westward to the very waves of the Pacific Ocean, the face of the country is hidden by a forest mantle of dark-green such as, perhaps, Old Mother Earth has never produced the counterpart.

From the crest of the Cascades to the ocean, the distance is about 100 miles; the descent being at first steep, then gradual, and the slope here and there carved and crannied into sunny vales of remarkable fertility.

Parallel with the Cascades, and within a few miles of the Pacific, extends the Coast Range—a chain of low mountains from 1,500 to 3,000 feet in altitude,

terminating at the Strait of Fuca in what are locally designated the Olympic Mountains— a spur of the main chain extending westward from Puget Sound to Cape Flattery.

Innumerable streams flow from these various mountain chains and spurs, each watering and draining as well the surface of a little valley, which, if limited in area, as all are, is nevertheless a marvel of productiveness, awaiting only the plowshare of the husbandman to make its rich soil laugh with abundant harvests, the deft hand of the orchardist to fill the air with the perfume of peach-blossoms, and the coming of the dairyman and the bee-keeper to make its clover-fields literally flow with milk and honey.

The eastern slope of the Cascades is more abrupt, resting at its base upon a vast table-land extending eastward to the Rocky Mountains.

This is part and parcel of the great Rocky Mountain Plateau that stretches away from the ice-fields of the Arctic to the *mesas* of Mexico. That portion of this great elevated plain lying within the State of Washington is drained by the Columbia River and its tributaries, and is very properly termed "The Columbia Basin." Its general elevation is about 4,000 feet above sea-level; its valleys, of which it has a goodly number, are fertile, and its high, rolling "divides" afford excellent pasturage. This is the famed grain-belt of the State, and the especial domain, likewise, of the horse, cattle, and sheep rancher.

Besides cereals, fruit and vegetables of all kinds common to temperate latitudes are readily grown, and yield abundantly, though much of the soil requires irrigation.

PUGET SOUND is a large inlet, or rather series of inlets, penetrating deeply the northwestern part of the State, and contains many islands and numerous safe, deep, and roomy harbors. It has a shore-line of 1,843 miles, and is connected with the Pacific Ocean by the Strait of Juan de Fuca, which is eighty miles in length, and varies in width from eleven to twenty-five miles.

Clustering about the shores of this great inland archipelago are Tacoma, Seattle, Olympia (the capital of the State), Port Townsend, Fairhaven, Everett, New Whatcom, Blaine, Anacortes, Steilacoom, Port Angeles, and other cities and sea-ports of Washington, while just across the strait is Victoria, B. C., upon the Island of Vancouver, with which, as with all other points on the sound not reached by its road, the Northern Pacific has direct communication by its steamers.

Two large bays (Gray's and Willapa harbors) indent the coast to the south and west of Puget Sound, affording excellent harbors for shipping, and the former having recently acquired direct communication with all parts of the State through the construction by the Northern Pacific of a branch line connecting with the Pacific Division of its main line at Lake View and Centralia, respectively. A line is under construction from Chehalis, on the Pacific Division, to

South Bend, a most promising young city on Willapa Harbor, and will probably be completed by July 1, 1892.

THE CLIMATE OF WASHINGTON is mild, equable, and healthful. That of the western or coast section of the State is remarkable for its equability, the winter months being warm and humid, and the summers comparatively cool and dry. The thermometer rarely falls to zero in winter, and as rarely reaches 85° in midday in summer. Rains are prevalent during the winter season, but are generally light. A snow-storm, except upon the mountains, is an occurrence so unusual as to create wide-spread comment. Violent wind-storms are almost wholly unknown, and the rumbling of thunder a sound with which the ear is seldom greeted. The average temperature of this portion of the State is: For spring, 52°; for summer, 67°; for autumn, 53°; and for winter, 38°. Eastern Washington possesses a climate colder in winter and warmer in summer than the western or Trans-Cascade section, and has much less average rainfall, though it receives a fair supply of moisture in the way of a considerable snowfall.

LUMBERING, AGRICULTURE, AND MINING are the three chief resources of Washington, inherent in the soil; and, together, they have developed for the State a surprising and rapidly increasing commerce both by land and sea. Western Washington is the lumber, hop, and fruit section, while Eastern Washington is also quite extensively engaged in fruit-culture, and greatly excels in grain and stock-raising. Hops grow well almost anywhere in the State, but are grown with the greatest average success and profit in the "yards" devoted to their culture in the vicinity of Puyallup (Pū-ăl'-ŭp), Kent, and the Puget Sound country in general. The yield in this locality is from 1,200 to 4,000 pounds an acre, and the average cost of raising and preparing for market, 9 cents a pound.

Red and black raspberries, service-berries (June-berries), huckleberries, choke-cherries, and the like, grow wild in great profusion, and apples, apricots, cherries, peaches, pears, plums, prunes, and quinces are the principal orchard fruits. The culture of grapes and tobacco is yet barely begun, though sufficiently experimented with to insure success.

MINING is yet in its infancy in Washington, though extensive and valuable deposits of coal, iron, lead, copper, tin, zinc, cinnabar, nickel, silver, and gold are known to exist in various parts of the State, and have been already "prospected" somewhat. The development of coal-mines has progressed much more rapidly than that of the mines of gold, silver, etc., and the same may be said regarding the quarrying of lime and building-stones. Coal of excellent quality and in large quantities is being daily mined and shipped from six separate districts within the State; these are Bellingham Bay, north of Seattle; Bucoda, Durham, Wilkeson, and Carbonado, in the vicinity of Tacoma, and Roslyn, just east of the "divide," in the Cascades.

THE FISHERIES OF WASHINGTON are worthy of mention, and will eventually prove of very great value to the State. The canning of salmon has for several years been an important industry, and added not a little to the volume of the State's exports. Cod, halibut, herring, sturgeon, clams, oysters, and lobsters are also quite abundant, though their taking has never been prosecuted with anything like the vigor manifested by Atlantic Coast fishermen, and which has built up and for half a century almost wholly sustained many a New England town.

SCENIC ATTRACTIONS.—No part of the Union can boast scenery of greater sublimity and grandeur than that of the Cascade and Olympic Mountains, along the dalles and cascades of the Columbia, in the vicinity of Lake Chelan, Mount Tacoma, and the majestic Falls of the Snoqualmie.

GAME.—Bears, elks, deer, mountain sheep, and mountain goats abound; grouse and pheasants are numerous; and wild ducks, geese, and brant afford autumnal coast-shooting, such as sportsmen along the Atlantic seaboard rarely enjoy.

Trouting is excellent in nearly all the lakes and streams on either side of the Cascades.

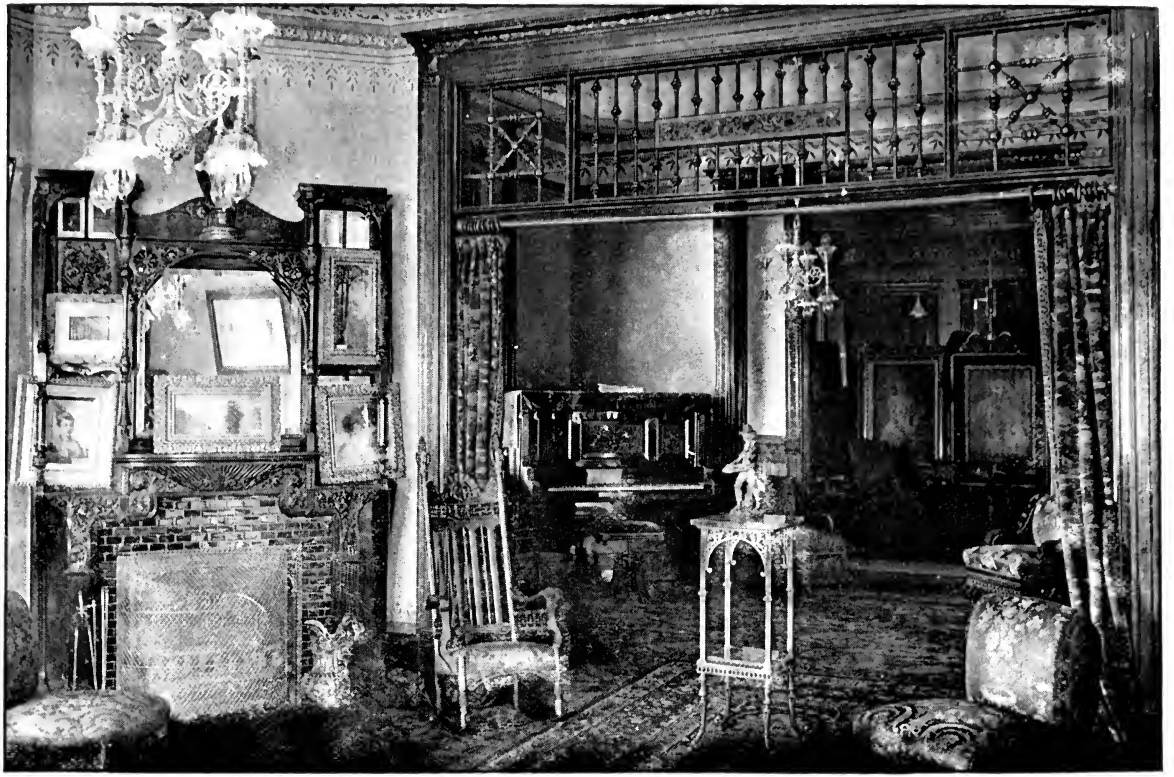
Washington has five lakes of considerable size that have acquired something of coastwise celebrity as pleasure and health resorts. These are Lakes Washington and Union, adjoining the suburbs of Seattle; American Lake, adjacent to the City of Tacoma; Lake Chelan, in the Okanogan mining region, and Medical Lake, on the Central Washington Branch of the Northern Pacific Railroad, eight miles from Cheney, and twenty-one miles westward from Spokane. This last-named lake, though considerably smaller than the others—being only one and one-half miles long by half a mile wide—is fast becoming celebrated by reason of the curative properties of its waters. It occupies an elevated plateau, and is skirted by a growth of pines, firs, and tamaracks, which add greatly to its landscape beauty. Its medicinal properties are said to be very efficacious, especially in diseases of a rheumatic nature, and it is estimated that fully 5,000 persons annually visit the lake for treatment. It is, of course, a summer-resort, and has hotels, bath-houses, and splendid drives. There are other lakes in the immediate vicinity well stocked with fish.

The Northern Pacific operates about 750 miles of railway in the State of Washington, and there is no town or city of importance, no sea-port either present or prospective, and no mining district or lumbering or agricultural region which its main line, or some one or more of its numerous branches, does not penetrate.

OREGON

Resembles Washington in its various features of surface, soil, and climate. Like the latter, it is divided into two separate and entirely distinct climatic sections by the Cascade Mountains.

OFFICE OF HOTEL BROADWATER.



PARLORS, HOTEL BROADWATER.

Western Oregon possesses a climate somewhat similar to that of Western Washington, and its extensive, fertile, and beautiful Willamette Valley enjoys a world-wide reputation such as few localities, even upon the favored Pacific Slope, have acquired.

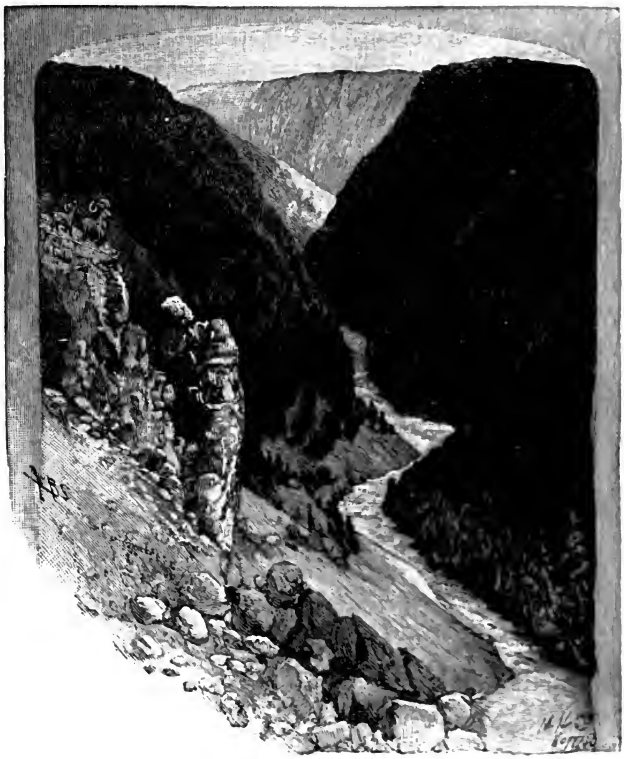
It has long been well settled by thrifty farmers, stock-raisers, and fruit-growers, and supports a number of towns and cities of considerable size, the most important being Salem (the capital) and Portland.

The Umpqua and Rogue River valleys, of Southern Oregon, are also noted as fine farming and fruit-growing sections. The Coast Range separates the Willamette Valley from the ocean; and both this and the Cascade Range are heavily timbered.

Eastern Oregon is for the most part rather too arid for successful farming, and is chiefly devoted to the raising of cattle, horses and sheep. This section, however, contains a portion of the same rich wheat-belt that extends throughout Eastern Washington from Spokane to Walla Walla. In Oregon this belt lies between the Blue Mountains and the Columbia River, embracing almost all of the county of Umatilla.

There are also two quite large valleys—the Grande Ronde and Wallowa—where farming is successfully carried on without irrigation.

The State's chief exports are wheat, wool, lumber and salmon.



CHAPTER IV.

YELLOWSTONE NATIONAL PARK—ITS HOT SPRINGS—GEYSERS—STREAMS—LAKES—FALLS—CAÑONS—CASCADES AND NOBLE MOUNTAINS.

THE WONDERLAND OF THE WORLD.

USTLY celebrated as is the North American Continent for mountain, woodland, lake, and sea-side resorts calculated to conduce to the health and recreation of mankind, it has been left to the last quarter of the nineteenth century to roll away the barriers of inaccessibility, and dispel the mists of misinformation and skepticism which have hedged in and enshrouded the wonderland of the world—Yellowstone Park.

Prior to the building of the Northern Pacific Railroad, very few travelers cared to undertake a tour of this remarkable region, situated midway between the Great Lakes and the Western Ocean, in the very heart itself of the Rocky Mountains; but with the advent of that great transcontinental thoroughfare in close proximity to its northern boundary, and the construction of commodious hotels and substantial wagon-roads within its borders, thousands have annually been attracted thither, and all have departed deeply impressed, not alone by the wild beauty and grandeur of its scenery and its natural wonders, but, in degree scarcely less, that a region of so much interest and so readily accessible should have had for its astonished visitors only the red man and the wandering trapper for so many years, while Atlantic steamers are almost daily thronged with allegedly patriotic Americans eager to undertake long and discomforting ocean voyages to visit scenes less worthy their appreciation.

In general topography, Yellowstone Park is a large table-land, fifty-five by sixty-five miles in extent, embracing an area of 3,575 square miles, of an average elevation of 7,000 feet above the sea; the whole environed round about by mountain-spurs whose glistening peaks, clad in eternal snow, rear their crests from 3,000 to 5,000 feet higher than the table-land itself.

It would be difficult indeed to find a like area presenting a greater diversity of character; and aside from its curious hot springs and awe-inspiring geysers, the average lover of the sublime in nature will find sufficient in a study of the majestic falls and grand cañon of the Yellowstone River to amply repay a

visit, to say nothing of picturesque mountain lakes, wild gorges, and dancing cascades with which the reservation abounds; while the disciple of Isaak Walton will find it a veritable paradise of sport in the way of unrivaled trout and grayling fishing, in the enjoyment of which not even the traditional bent pin and plebeian grasshopper are to be despised by the more fortunate possessor of Limerick hook and silken fly.

Within the boundaries of this wondrous geyser-land are upward of 3,000 hot mineral springs and seventy-one active and powerful geysers, grouped in "basins," which from June 1, to October 1, are daily traversed by the stages of the Yellowstone Park Association.

The exclusive control of the management and protection of this mammoth pleasure-ground is vested in the Secretary of the Interior; so that not only are the proper policing of the Park and the preservation of its multifarious objects of interest and its game animals assured, but the tourist guaranteed against extortion.

Leaving the main line of the Northern Pacific at Livingston, at the head of the main valley of the Yellowstone, a ride of fifty-one miles over its Park Branch to the southward, along the west bank of the Upper Yellowstone; through Paradise Valley, famed for its scenery, its farms, its trout-fishing, and its autumn duck-shooting; on through narrow, rocky "Yankee Jim" Cañon; along the base of Cinnabar Mountain, in plain view of the giant "slide," where Fancy pictures Lucifer as a tobogganist, brings the traveler to Cinnabar Station —the terminus of the branch road—hard by the northern boundary of the Park.

Exchanging seats in the comfortable chair-car for others equally inviting in the great, roomy stages in waiting, tourist-guests are driven to Mammoth Hot Springs—seven miles distant—arriving at its spacious hotel in time for dinner.

Here, within a few minutes' walk of the hotel, and occupying a mound of carbonate of lime embracing 170 acres, is a group of fifty hot mineral springs, whose inexhaustible fountains have for ages boiled and bubbled and toiled to upbuild the grand system of terraces out of which they issue. These terraces were formerly known among explorers, geologists, and casual travelers as the "Pink Terraces of the Gardiner River," but are now more generally referred to as Mammoth Hot Springs.

Adjacent to the hot spring terraces is the crest of another gentle acclivity, upon which is located Camp Sheridan—the headquarters of the superintendent and his cavalry troop, to whom the patrolling of the large reserve is a constant care.

From this point the visitor starts upon his six-day tour of inspection of the geyser-basins, the falls, cañons, lakes, and cascades of this interesting region; climbing a long, sloping hill leading up to the east entrance of Golden Gate —a rocky gorge affording the only feasible means of exit southward from the

narrow valley of the Gardiner River. The roadway through this pass is 1,000 feet higher than the hotel at Mammoth Hot Springs, and, though hardly a mile in length, cost $14,000.

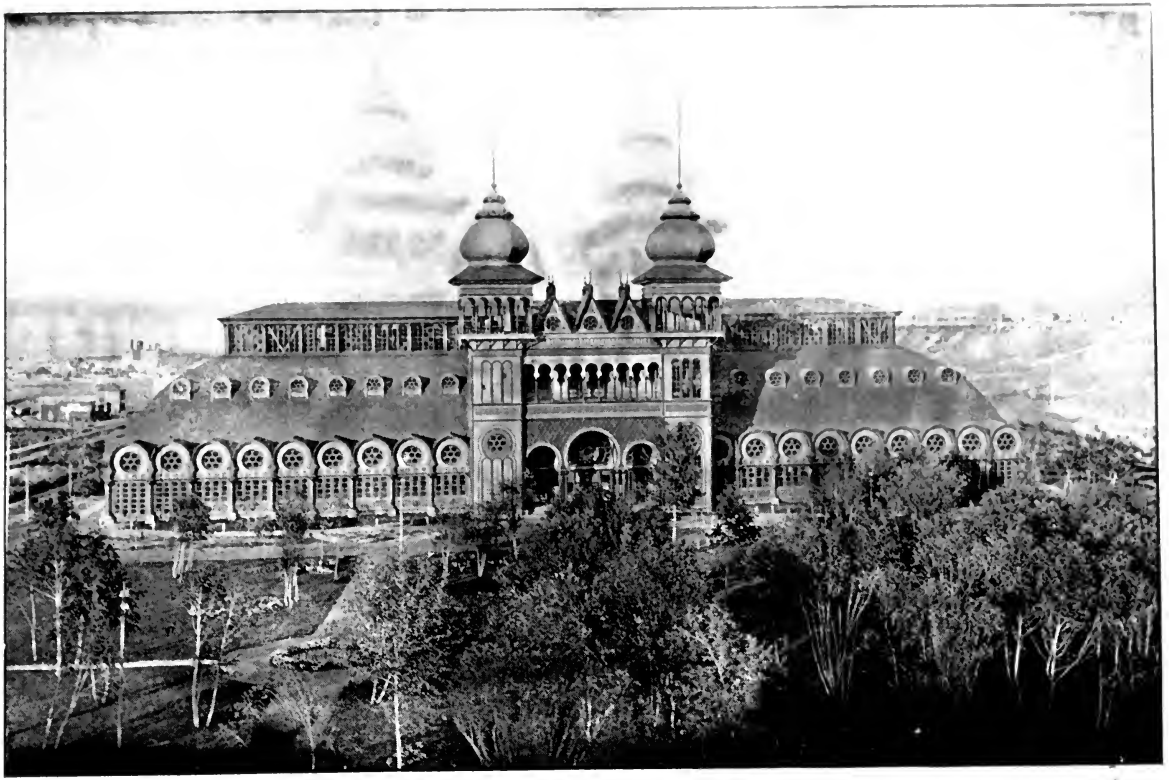
Eight miles farther south is Obsidian Cliff, or Glass Mountain, where, towering above the narrow stage-road to a height of 250 feet, is an escarpment of glistening volcanic glass (obsidian), arranged in vertical columns, pentagonal in form, but more or less irregular and distorted. The prevailing color of this mineral glass is jet-black, and the road-bed along the base of the cliff is constructed almost entirely of its broken fragments.

Numerous chips of obsidian, and broken or unfinished arrow-heads, etc., occasionally found in the vicinity, have lead many to suppose that this spot has in times past been quite generally frequented by the red men of the Rocky Mountain tribes; and possibly used to be quite as celebrated among them as the famed "pipe-stone quarries" of Minnesota have been for ages among their brethren of the prairies.

The first of the geyser-basins reached by the visitor is Norris Basin—twenty-two miles south of Mammoth Springs—embracing an area of about six square miles, through which the stages run on their way to Lower, Midway, and Upper geyser-basins still farther to the south. "Norris" is one of the most elevated of the several thermal basins of the park, being 7,527 feet above the sea. Its hot springs, which are numerous and widely distributed, are in many instances exquisitely formed and highly interesting; though its geysers (with perhaps three or four exceptions) possess less of the awfully grand, eruptive power which characterizes most of the geysers of the three basins just mentioned.

From Norris to the Lower (Firehole) Basin, the distance is twenty miles; the scenery along the route being quite charming, particularly in and about Gibbon Cañon—a narrow, rocky defile four miles in length, whose cliffs seem reluctant to open wide enough to allow both the stage-road and the clear, cold waters of the Gibbon River a passage.

The wild grandeur of this rocky chasm is difficult of adequate portrayal. On this side, precipitous bluffs hang high above the roadway; on that, a dense growth of pines clothes the steep mountain-side with a drapery of dark-green. Here, a hissing steam-vent fills the air with sulphurous vapors; there, a fiercely boiling caldron pours its scalding overflow across the roadway beneath the very feet of the stage-horses. And, as a fitting denouement, at the cañon's exit, the foam-flecked river, tossed and fretted by tortuous windings, obstructing bowlders, and rocky rapids, plunges eighty-four feet into the gorge below, and deflecting sharply westward is lost to view, leaving the tourist to climb a succession of pine-clad terraces, and gaining at last the crest of Teton Hill, to catch a restful glimpse of the panorama of the Valley of the Firehole and the forest-covered mountain-slopes around and beyond. Below, in the foreground, is the new, commodious, and nicely furnished hotel near Fountain Geyser, in



BROADWATER NATATORIUM.

INTERIOR VIEW, BROADWATER NATATORIUM.

Lower Geyser-Basin, or "Firehole Basin," as it used to be called—five miles distant. Three miles beyond, the white wreaths of vapor floating above the tree-tops mark the location of Excelsior Geyser, in the Midway Basin; while seventy miles away to the south rise the snow-crowned "sentinel peaks" of the Teton Mountains, grim, silent, and spectre-like.

Scattering groups of hot springs, to the number of 693, exclusive of seventeen geysers, dot the broad, marshy, sulphur-smelling area of the Lower Basin, the elevation of which is 7,252 feet. This is one of the much-frequented game-resorts of the Park. Elks and deer are frequently seen, as are also—once in a while—straggling members of the band of buffaloes which are carefully watched and kept within the protecting limits of the reservation, and represent about all there is left of the once countless herds of bison that only a few years ago roamed the great prairies of the West, and contributed a proudly distinctive species to the fauna of North America.

As a rule, the visitor spends the second day of his *tour* in viewing those eruptive wonders of the Lower, Midway, and Upper basins—the geysers—the scalding discharges of several of which attain a height varying from 100 to 300 feet, the eruptions of the larger ones being accompanied by a deafening roar and a perceptible trembling of the ground. These volcanic springs occupy, as a general thing, mound-shaped platforms of silicious sinter, or geyserite—the result of ages of precipitation—and, in most cases, have nozzle-like cones of geyserite immediately surrounding their craters.

Entrancingly entertaining as all the geysers of the three thermal basins drained by Firehole River certainly are, "Old Faithful" stands beyond compare in point of popular interest. Occupying a conspicuous mound at the extreme southern limit of the Upper Basin, in plain view from the hotel a few rods distant, this reliable friend of the tourist rises with him in the morning, entertains him during the day, and claims his admiring gaze at night, when, if there be a full moon, the spectacle presented is sublime beyond the power of tongue or pen to describe.

Day and night, through summer's heat and winter's cold, this geyser, with almost chronometer regularity, shoots upward its sparkling columns of hot, steaming water (to a height of 150 feet) at intervals of sixty-three minutes, each display lasting about three minutes.

Tourists are conveyed from the Upper Basin direct to the gem *par excellence* of the Rocky Mountains—Yellowstone Lake. The construction of a substantial wagon-road of easy grade, from Old Faithful Geyser, past Kepler's Cascades and across the Continental Divide, to connect with the "falls and cañon road" at the "Outlet" of the Lake, enables stages to make a complete circuit of the most interesting points of the Park lying to the south and southeast of Norris, without retracing any part of the route.

This new route is one of the most delightful of the several thoroughfares

of the reservation, leading, as it does, through primeval forests, amid mountain scenery unsurpassed, with here and there green-carpeted meadows and open parks, and broad expanses of blue water to relieve the monotony of tall pines and snow-capped mountain-peaks.

At the eastern extremity of the lake, which is about fifteen by twenty miles in extent, is located another of the larger hotels of the reserve. This excellent hostelry, like that near Fountain Geyser, in the Lower Basin, is of recent construction, and is admirably suited to the needs of the large number of guests that daily visit the peerless lake, close beside whose pebbly margin it stands, and of whose broad expanse of limpid blue waves it affords a sightly and charming view.

From this point, a smooth, nearly level wagon-road follows down the open valley of the Yellowstone River—eighteen miles—to the Great Falls and Grand Cañon, whose awful grandeur must be viewed to be even faintly realized. The unrivaled river makes two mighty leaps ere it reaches the bottom of the cañon, which is ten miles in length and from 1,200 to 2,000 feet in depth. The upper fall is 140 feet in height, and the lower, or "Great Falls," 360 feet. Each is worthy a special trip to see. A few miles to the north is Mount Washburn—the observatory of the Park—whose rounded summit, easy of ascent, rises 10,346 feet above the level of the sea. From its bald crest a grand panorama is outspread. Far above, the proud eagle poises on motionless wing, a mere speck against the zenith. Below, the eye traces the broad ribbon of silver that winds through prairie and woodland until it is lost to sight in the chasm into which it leaps. That charming sheet of blue water is its source. There are the geyser-basins, thirty miles away to the southwest, their presence betrayed by the clouds of vapor that float like water-wraiths above them, while round about on every hand wide-rolling expanses of shadowy forest, giant domes of rugged mountain-peaks, here and there flecked with remnants of icy glaciers of dazzling whiteness, and deep, dark cañon-gorges echoing the sullen roar of cataracts, stretch away in billowy succession, until forest and mountain-top, glacier and gorge, blend with the blue of the canopy above and vanish into nothingness.

Large as is the accessible portion of the Park, fully two-thirds its area is *terra incognita* to all save the occasional enthusiast with the time and hardihood necessary to the scaling of mountain-crags and the threading of forest labyrinths.

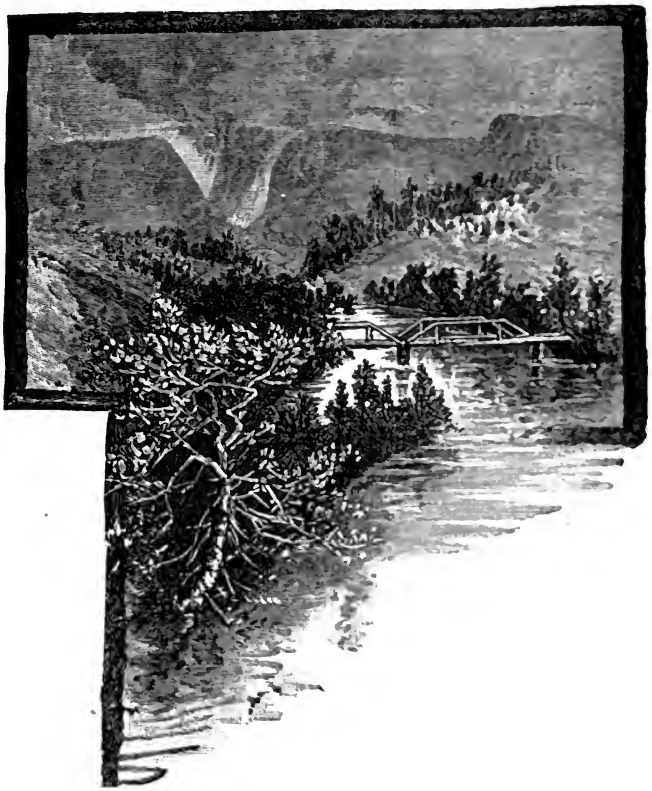
In the northeastern corner of the reserve are vast areas strewn with the fossil remains of animal and vegetable life, and huge trunks of petrified trees, many still standing erect and preserving something of the old-time form and grace of outline, deep down among whose stony roots may be found clusters of beautiful crystallizations, varying in color from the delicate shades of pink to deep cherry, while handsome crystals of colorless, amethystine, and yellow-

tinted quartz, in endless variety of size and form, lie scattered in reckless profusion on every hand.

To the northeastward of Lake Yellowstone, between the Passamaria Fork of the Big Horn River and the east fork of the Yellowstone, is the "Hoodoo Region," or "Goblin Land"—designations which in nowise belie the character and appearance of a locality in which volcanic action and erosion have seemingly striven each to outdo the other in the production of fantastic forms and shapes. To the superstitious Indian it was the abode of evil spirits. To the pale-face trapper, roused from his slumbers by the weird mutterings of the voiceless air, the entire region presented an enigma to the satisfactory solution of which the term "hoodoo" appeared to him the "open sesame."

The rough and rugged character of this locality makes it a favorite resort for the crag-loving mountain sheep and milk-white mountain goat, whose lambs and kids frisk about among its inaccessible heights and fastnesses, where none but the mountain lion or the eagle may pursue.

Sixty miles to the eastward of Mammoth Hot Springs, and just beyond the Park boundary, are the Clark Fork silver-mines, between which and the Springs a stage makes regular trips both summer and winter.



CHAPTER V.

THE JOURNEY WESTWARD — CITIES AND SCENERY OF THE YELLOWSTONE VALLEY — TROUTING IN THE YELLOWSTONE — SCENERY ALONG THE CLARK FORK — CLIMBING THE CASCADE MOUNTAINS — STAMPEDE TUNNEL — ARRIVAL AT TACOMA.

ULY 28, 1891, at 2.05 A. M., I stepped on board the Northern Pacific's "Pacific Coast Express" at Fargo — North Dakota's vigorous young metropolis — equipped with pencil and note-book, a six-ounce "split bamboo," a quadruple "multiplier" an assortment of oiled-silk lines, a box of "leaders" and book of "flies," and a "duffle-bag" stowed with outing-flannels, a canvas fishing-suit, and the usual line of etceteras common to this latitude, and suited to a large, blonde complexion, with intent to devote the succeeding five weeks to the carrying out of the design casually alluded to in the introductory lines and initial chapter of this brochure.

Telegraphic advices assured me that F. Jay Haynes, official scenic artist of the Northern Pacific, who was to assume the rôle of guardian *ad litem*, as it were, and who had been sojourning for several weeks in Yellowstone Park, would join me at Livingston, Mont., with his studio-car, on arrival of the Park Branch train the following evening.

The day that had just contributed its quota of sensation and moral depravity to the already plethoric and unsavory record of the past had been one of the hottest of an unusually heated term. Even the moonbeams, that ever and anon pierced the veil of fleecy clouds that slowly and majestically sailed athwart the starlit heavens like white-sailed ships upon a summer sea, bore unmistakable proof, convincing "beyond a reasonable doubt," in their warped and shriveled appearance, that the caloric of yesternoon had not been entirely eliminated from the circumambient atmosphere — or that in substance.

Under the circumstances, even the blissful seclusion and luxurious upholstery of a Northern Pacific bridal apartment would scarcely have wooed the drowsy goddess successfully. (In this allusion my imagination pictures a bright-eyed, rosy-fingered *Miss* Morpheus — temporarily in charge of the Lethean distillery, while the ancient sleep-compeller is laid up with the gout; and if

not above classical criticism on the score of mythological inconsistency — this being to a greater or lesser extent an age of free thought — those disposed to find fault with this pseudo-nymph of my creative genius are quite welcome to recline in the arms of *Papa* Morpheus, if they rest any better that way, and leave me to the cuddling embraces and crooning lullabies of the damsel, or to become the victim of insomnia, as the case may be.)

Declining both the unoccupied upper berths—all that remained in the way of sleeping accommodations in the Pullmans—I repaired to one of the smoking-rooms, and lighting a weed, gazed through the open windows out upon the sea of fast-ripening grain that lay shimmering in the moonlight, and stretched away in billowy simulation on every hand. Here and there a field of yellow barley already stood in the "shock;" and everywhere the great trundling machines for cutting and binding grain awaited with gleaming sickles the time for action.

Although I had gazed hundreds of times upon these same fruitful prairie farms during the various stages of grain-growth, from seed-time until harvest, had listened to the drone of the bee and the hum of the steam thresher, the early piping of the curlew and the "booming" of the grouse, I seemed to find new interest springing up and growing within me as I looked out upon the moving panorama of wheat-field and meadow, village and plain, this summer morning. Recollection took me by the hand and led me back along the shadowy pathway of the past to the milestone where bold Oliver Dalrymple, here upon these prairies, opened his experimental wheat-farm, refuted the statements that the busy tongue of slander had scattered to the four winds regarding the barren character of the region, and demonstrated to an incredulous world the wonderful fertility of North Dakota's soil and its adaptability to the raising of cereals.

And now I looked out upon this identical princely demesne, and recalled the doubt and anxiety that filled every breast but Mr. Dalrymple's, while soil and climate were being weighed in the balance, as it were, during that first crop-year.

And as we journeyed, Fancy met us by the way, and taking from the folds of her flowing vesture a scroll, bade us look upon the future estate of the Land of the Dakotahs. What a change! Nearly every quarter-section now has its tidy farm-house. Corn vies with wheat for the regal crown; and honey-bees hum amid orchard-bloom. Instead of a population of 200,000, five times that number of sturdy, prosperous people find happy homes in the new North State, healthful and profitable employment in tilling her more than ever fruitful soil, and fame and fortune in developing her mines, manufactures, and commerce.

The engineer's sharp, decisive call for brakes, and the unusual swaying of the cars, serve to recall me from the land of dreams to find that we are winding through the picturesque bluffs bordering the deep valley of the Sheyenne; that

my cigar has long since ceased to burn, and that I have been asleep nearly two hours. Soon we stop at Valley City, the capital of Barnes County, its houses and streets shaded by elms, lindens, and cottonwoods that here and there cluster in cool, restful-looking, natural groves upon the banks of the tortuous river.

Early as was the hour (4.50 A. M.) when the long train pulled out of Valley City and began climbing the rolling prairie-divide separating the valleys of the Sheyenne and the James, the eastern sky was already crimsoning with the beams of the rising sun, and all nature seemed to be awakening from a season of restful slumber. On every hand flower-petals were beginning to open, birds to sing, and slender columns of thin, bluish smoke to ascend from farm-house chimneys. Anon, as the train speeds past a near-by farm-yard, a proud old turkey-cock may be seen leading his populous harem a-field in quest of the usual breakfast of crickets and grasshoppers, and pausing at brief intervals in his stately strut to spread his bronze fan, distend his red wattles in rising anger, and gobble defiance at the puffing locomotive. On speeds the train past Sanborn, Lake Eckelson—whose seven miles of glassy surface, glistening in the morning sun, bespeak the celebrated resort that it is for geese and water-fowl, and for the fowler as well—and Spiritwood, to Jamestown, nestling in the valley of which it is the sprightly namesake.

Breakfast was announced almost immediately upon our leaving Jamestown, and just as we had begun to climb the grass-carpeted hill-sides overlooking the valley we were leaving behind, and leading to the rolling "Coteaus" beyond.

Often as I had gazed admiringly upon this same charming picture of winding bluffs, meandering river, and red-walled city, I made no effort, in spite of the urgent demands of a robust appetite, to resist the impulse that prompted me to step out upon the car platform to catch a glimpse of the summer landscape, and drink in, the while, deep draughts of the morning air, redolent of the perfume of wild roses and not yet heated oppressively by the scorching rays of a July sun. The view is all too soon obstructed by intervening swells, and I repair to the "diner" and to the discussion of a breakfast excellent in quality and cookery, and admirably served.

Breakfast finished, I strolled forward to the smoking-car, and among other things enjoyed a mild cigar and a highly entertaining joint debate between two gentlemen touching the desirability (aside from the secondary question of propriety) of so amending the alleged Rules of the National House of Representatives as to embrace what used to be known and highly commended in the more select circles of upper tendom as the Rules of the London Prize Ring; but which the æstheticism of more recent years has regilded, newly decorated, and introduced to public favor under the firm name and style of the Delsarte System of Physical Culture.

I very soon became convinced that the eloquent debaters were partisan adherents of political parties differing to some extent in theories of civil government and public plunder, and that they were, withal, pretty well read in the administration of public affairs, both antecedent and current. It likewise became apparent that the discussion grew out of the exhibitory entertainment given by the company of which the gentleman from Texas, Mr. Kilgore, appeared in the rôle of leading man (or, strictly speaking, perhaps, one of the leading men); I refer to the star engagement played under the auspices of the Fifty-first Congress, of which latter aggregation one T. Brackett Reed, I am informed, enjoyed a fair measure of success as the proprietor and manager.

I remembered to have seen sundry caustic editorial *critiques* touching the performance in question, which enabled me to better comprehend the subject-matter of the present discussion, and appreciate the forceful arguments presented.

So deeply interested had I become, in fact, that I had not noticed that the train had passed Dawson and Steele, in Kidder County, and was at the moment drawing up to the platform in Bismarck. I was only too glad, however, of even a ten-minute opportunity for walking and open air exercise, and felt inclined to protest mildly when the courteous conductor called "All aboard!" Consoling myself with the reflection that Mandan was but five miles west, and that point being the end of the Dakota Division of the road, we should probably make a fifteen or twenty-minute stop there, I stepped upon the rear platform of the train in order to get a good view of the great bridge and greater river flowing far beneath.

We arrived at Mandan at 10.40, and I at once set my time-piece back to 9.40, as the change from "Central" to "Mountain" time occurs here — the latter being, as a matter of course, one hour slower than the former. This done, I joined the strollers about the platform; and as I scarce ever pass Mandan without spending a few minutes in looking over the Indian relics and specimens — really fine ones — of the taxidermist's art and skill exhibited in a small curio-shop at one end of the depot platform, I made this visit no exception to the rule.

When at length, after the usual stop, the heavy train again got under headway, we were rapidly whirled up the valleys of the Heart, the Sweet Briar, and the Curlew; across the Little Missouri; on past Sentinel Butte, whose flat summit still shows traces of rifle-pits and breastworks hastily constructed by the lamented Custer and his Seventh Cavalry troopers when surrounded and beset by the crafty Sioux in the early '70's; through the weirdly grotesque Bad Lands, reaching the historic Yellowstone Valley, at Glendive, just as the great red disk of the midsummer sun is slowly sinking behind the gilded battlements of Iron Butte — seemingly reluctant to relinquish even a hemisphere to the sombre and cooling shades of night.

I had, soon after leaving Mandan, secured a desirable sleeper-berth, and after luncheon had availed myself of its comforts for a two-hours' nap so that as the train wound its rapid course up the bluff-margined Valley of the Yellowstone, and the rising moon — nearly at its full — began to light up the shadowy buttes, I felt no inclination to retire to rest; preferring rather to kindle the anterior end of a cheroot and gaze out in meditative thought upon a landscape endeared to me by long and intimate acquaintance, and among whose cedar-clad buttes and darksome ravines I had in days gone by successfully stalked the black-tailed deer, the antelope, and the big-horn.

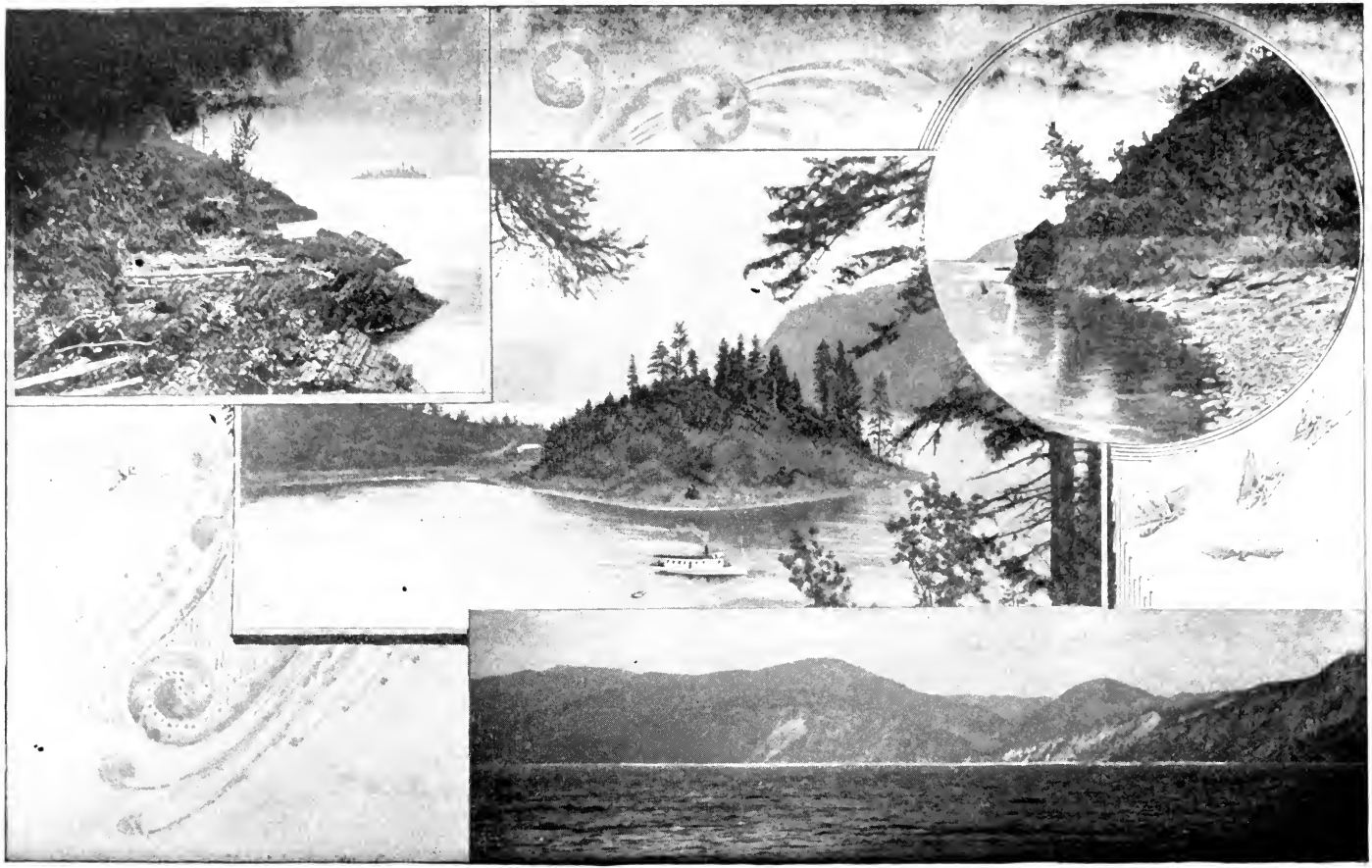
Those were indeed joyous days; particularly that one on which I followed for long, weary hours the snowy trail of an estray horse that a party of hunters, of which I was a member, needed very much at the moment, but didn't recover for half a day, in spite of wishing and — equally efficacious diversions.

Thus meditating, the train had sped past the outlets of the Cedar, the Cabin, and O'Fallon creeks — one and all traversing capital hunting grounds—and was rumbling over the bridge at the Powder River Crossing at 9.10 P. M., ere I began to realize the flight of time.

On the right flowed the Yellowstone, long reaches of its moonlit surface at times gleaming out from amid bordering trees with wavy, tremulous reflection of silvery rays. On the left and south a rolling plain stretched away toward the Powder River Range and its game-haunted fastnesses. Miles City, at the confluence of the Tongue and Yellowstone rivers, is reached at a quarter after 10, and Fort Keogh — three miles beyond — a few minutes later.

The railway hugs the south bank of the Yellowstone all the way from Glendive to Billings — 225 miles; the north bank from the latter point to Reedpoint — forty-two miles; and again the south bank to Livingston — fifty-seven miles. Of the lower valley, Glendive and Miles City are the important towns — each having a population of 1,500 or upward, and being the county seats of Dawson and Custer counties, respectively. Each is the banking, business, and shipping center for a large area of cattle and sheep country; and the former is the end of the Missouri Division and beginning-point of the Yellowstone Division of the Northern Pacific. Billings and Livingston are the correspondingly important towns of the upper half of the main Valley of the Yellowstone, Livingston being the junction of the Yellowstone and Montana divisions of the road. Billings is the county seat of Yellowstone County, and a well-built town of 2,000 population. It enjoys electric-lights, water-works, excellent schools and churches, and has commodious hotels, substantial banks, a 200-barrel flouring mill, brick-yards, daily newspapers, a plant for scouring and pressing wool, etc. About 100,000 acres of land in the vicinity are rendered productive by a thorough and well-arranged system of irrigating ditches. Large shipments of wool, grain, flour, building-stone, cattle, sheep, and horses are made from Billings; and the city is connected with the Maginnis mining district by daily stages.

HYDRAULIC MINING ON THE JEFFERSON RIVER, MONTANA.



LAKE PEND D'OREILLE, NORTHERN IDAHO.

Seventeen miles beyond, at Laurel Junction, a branch road (the Rocky Fork & Cooke City Branch) leaves the main line and runs sixty-one miles to Red Lodge, Mont., a coal and mining region of considerable celebrity.

Livingston is situated at the extreme head of the main valley — 116 miles west of Billings — and is the capital of Park County. The Northern Pacific effects its third and final crossing of the Yellowstone River near the city. It is naturally and charmingly located in an amphitheatre of noble mountains, whose snowy peaks very sensibly temper the atmosphere of summer; and its people, some 2,800 in number, are among the most energetic and progressive of Montana. A branch of the Northern Pacific extends south from this point to Cinnabar — fifty-one miles distant — at the northern boundary of Yellowstone National Park; and a line also runs to Cokedale, whose numerous "ovens" daily turn out large quantities of excellent coke. Connection by stage may also here be had with the Castle Mountain and Neihart mining districts.

We were just crossing the Yellowstone at Reedpoint when I awoke at 6.35 next morning, and I was still enjoying a taste of mountain trout and the luxuries of the breakfast-table as the train drew up at the station at Springdale, where a dozen or more sufferers from rheumatism, bound for the near-by Hunter's Hot Springs, took a painful departure. To partially make up for this depletion of our passenger-list, four gentlemen and three ladies boarded the train. I felt quite certain that they had been visitors of the noted health-resort, and being desirous of learning their opinion of the efficacy of the waters of these much-talked-about springs, I sought an interview with one of the gentlemen of the party, and learned that they had spent a month at the springs, and were now on their way to the Park. "To be sure," said my informant, "none of our party was helpless, as many are who visit the springs, but we all had suffered considerably from rheumatism and one or two of us from kidney trouble. We had regularly bathed in and drank of the hot mineral water for a week or such a matter before feeling its effects in a decided way, but from that on improvement was very marked and unmistakable. My wife and I have spent three winters at the springs in Arkansas; and, judging from experience and observation, I have no hesitancy in giving it as my opinion that the waters of Hunter's Hot Springs are fully as remedial in their effect upon persons afflicted with rheumatic disorders as those of Arkansas. At all events, we feel so much more vigorous than we did when we arrived here that we purpose doing the wonders of the National Park and making a visit to the Pacific Coast before returning to Pennsylvania."

The morning air was delightfully and refreshingly cool as we sped on up the narrowing valley, in plain sight of the white peaks of the Crazy Mountains on the right and the Snowy Range on the left hand. Small fields of grain, millet, alfalfa, and flower and vegetable gardens began chasing one another down the

valley as we bowled onward; and thickets of water-willow and groves of green pines gave tone to a landscape already beginning to assume the russet garb of autumn.

We rolled into Livingston "on time" at precisely 8 o'clock, and I was surprised to note that fifty-nine passengers boarded the Park Branch train in waiting. I concluded that the marvelous precincts of the national play-ground were about to be invaded by an excursion party of possibly some educational or denominational stripe; but the matter-of-fact conductor, to whom I mentioned this hypothesis, looked at me a moment in a curious sort of way, and said: "Perhaps you have an idea that few people visit the Park; I can assure you, sir, that this season's guests will run well up to 7,000, and every season adds to the popularity of the great "Geyserland." I thanked the genial official for the information imparted, apologized for my error of judgment, and tossing my luggage into the baggage-room, prepared to await the arrival of Mr. Haynes and his studio-car. Naturally, I made a prompt call upon the "boys" upstairs in the superintendent's office, and learned that trout were reported as biting in a lively manner in the Upper Yellowstone, along the Park Branch. This information, and the realization that I could probably enjoy three or four hours' fishing between the up and down trips of the Park train, instantly decided me to go to Daileys — thirty-one miles south; and the resolution was formed none to soon, as I had barely time to get my "outfit" together and board the train, just on the point of starting for Cinnabar.

The sequel proved that if I had been just a little less prompt in "calling on the boys," and a trifle less eager to profit by the gossip of Dame Rumor, I should have escaped a tiresome tramp, an exasperating recollection of past successes in the same waters, and a badly sun-burned neck and face.

Probably the blazing glare of the noon-day sun contributed somewhat to my ill-success; at all events, I landed but seventeen trout — the largest not above three-quarters of a pound in weight. I have ever regarded Yellowstone River, from its source to mouth — pretty nearly — as one of the finest trouting-streams (all things considered) of the American Continent. Its waters are clear, sparkling, and cold; it is easily and safely waded, just about rapid enough, has clean, rocky banks and pebbly margin, and I have never, except on this one occasion, failed of finding its large, gamy trout rapacious biters. I usually fish with three flies, properly adjusted on a six-foot "leader," and have often hooked three fish at a cast among the rapids near Daileys. Generally speaking, excellent sport with the rod may be had at almost any point along the Yellowstone and its affluent streams, from Livingston to and throughout the National Park.

I had wearied of "whipping" rapid after rapid without getting a "strike," and had already been half an hour in waiting at the little station when the down train arrived.

The average man would not require to be long domiciled in the luxurious traveling-studio of the Northern Pacific's landscape artist in order to forget even the keenest disappointment; and when I reflected that we at least had enough trout for breakfast, I felt disposed to yield myself a willing slave to the consoling influences that surrounded me.

As the greater part of our work, both photographic and inquisitorial, lay beyond the Cascades, Mr. Haynes, upon our arrival in Livingston at 6 o'clock, obtained the necessary order to have his car attached to the Pacific Express due about two and a quarter hours later, with the intention of proceeding direct to Tacoma and making that point our base of operations while on the coast. A delightful evening succeeded the warm day, but I was quite too weary to appreciate its charms, or find pleasure in anything but sleep. Accordingly, as soon as our car had been attached to the west-bound train and we were once more well under way, I retired to the quietude of the airy state-room that had been assigned me, and addressed myself to rest and slumber.

When I awoke next morning we were speeding down the Clark Fork of the Columbia, having passed Bozeman and Helena in the night, and Missoula early in the morning, ere I had become conscious of the dawning of another day. I confess to feeling a trifle the worse for wear, a condition by no means so novel or so serious, however, as to occasion more than passing mention, and soon to be forgotten altogether in contemplation of the grand scenery through which we were wending our rapid way.

To the south and west lay the lofty Bitter Root Mountains—close at hand, the Clark Fork dashing along their base, its northerly bank hugged by the railroad. To the north and east extended the high, rolling divide that separates the immediate valley of the Clark Fork from the wide and fertile basin of the Flathead Lake region. Upon these swelling, grassy hill-sides bands of horses and cattle could be seen grazing, while in the deep valley through which lay our sinuous path of steel, crops not already garnered stood ripening in the summer sun. The vast expanse of dark forest that clothed the bold mountain-spur from base to summit here and there showed the destructive effects of fire, and presented a landscape sublime of outline and marvelously grand in detail; of beetling crags and yawning chasms, of rock-slides, and angry, foaming cataracts, such as only a great mountain-chain vouchsafes to man's all too often unappreciative gaze. Such proved to be the character of the country through which we traveled the livelong day; halting at Hope, Idaho, for a brief space —just long enough to permit every passenger to become enamored of beautiful Lake Pend d'Oreille, its emerald isles and picturesque surroundings, and reaching at eventide that marvel of Eastern Washington enterprise—Spokane (Spō-kăn').

At Marshall Junction—nine miles beyond—the Spokane & Palouse Branch

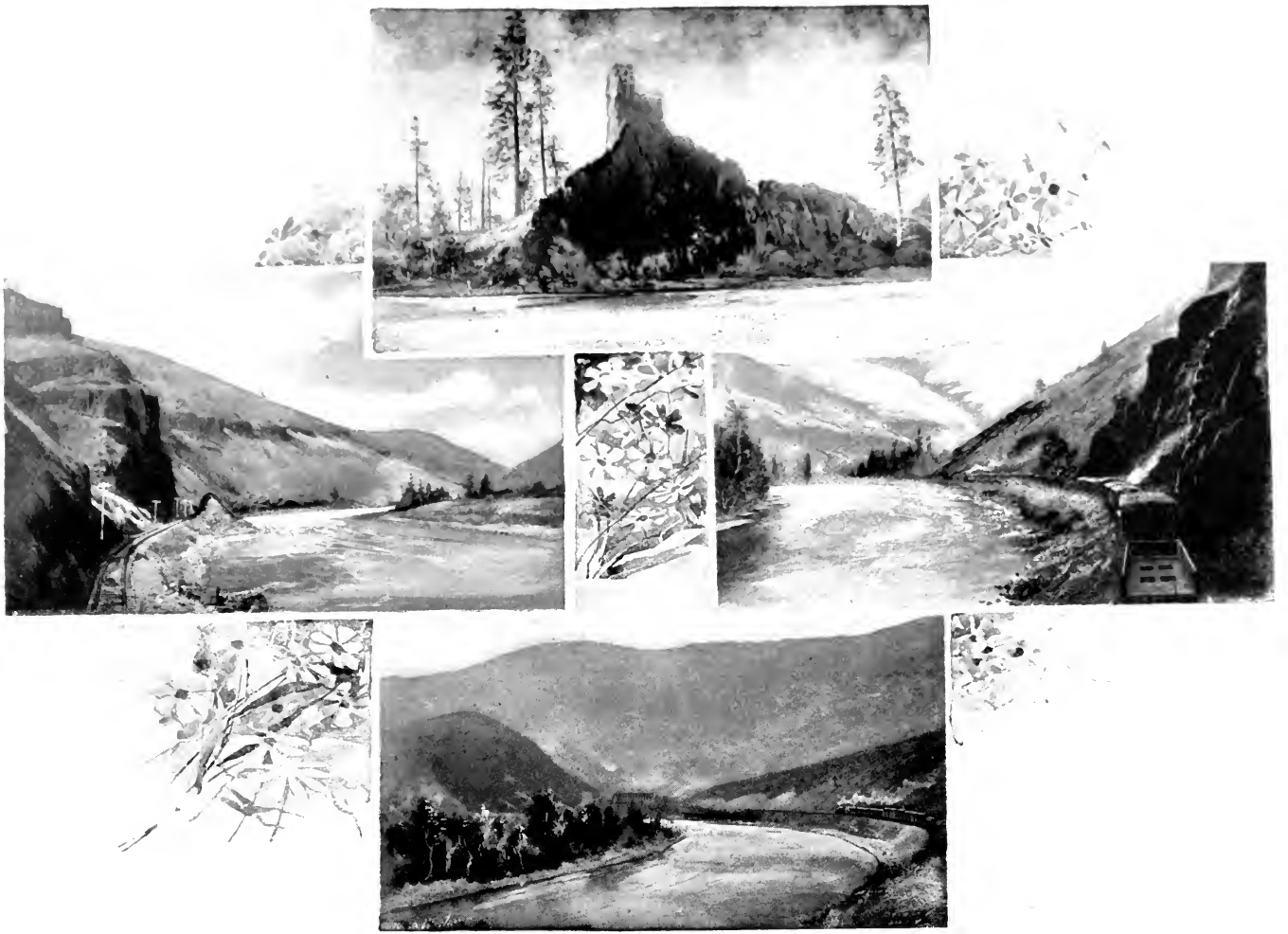
of the Northern Pacific leaves the main line and runs south 115 miles, through the famed "Palouse Country," to Julietta, Idaho.

The evening proved cloudy, even threatening rain; and by the time the train had reached Sprague—forty-one miles west of Spokane—the fast-gathering darkness rendered landscape observation so nearly impossible that I once more repaired to my electric-lighted state-room, and after consigning a few data and statistics to my note-book, again sought rest and forgetfulness in refreshing sleep.

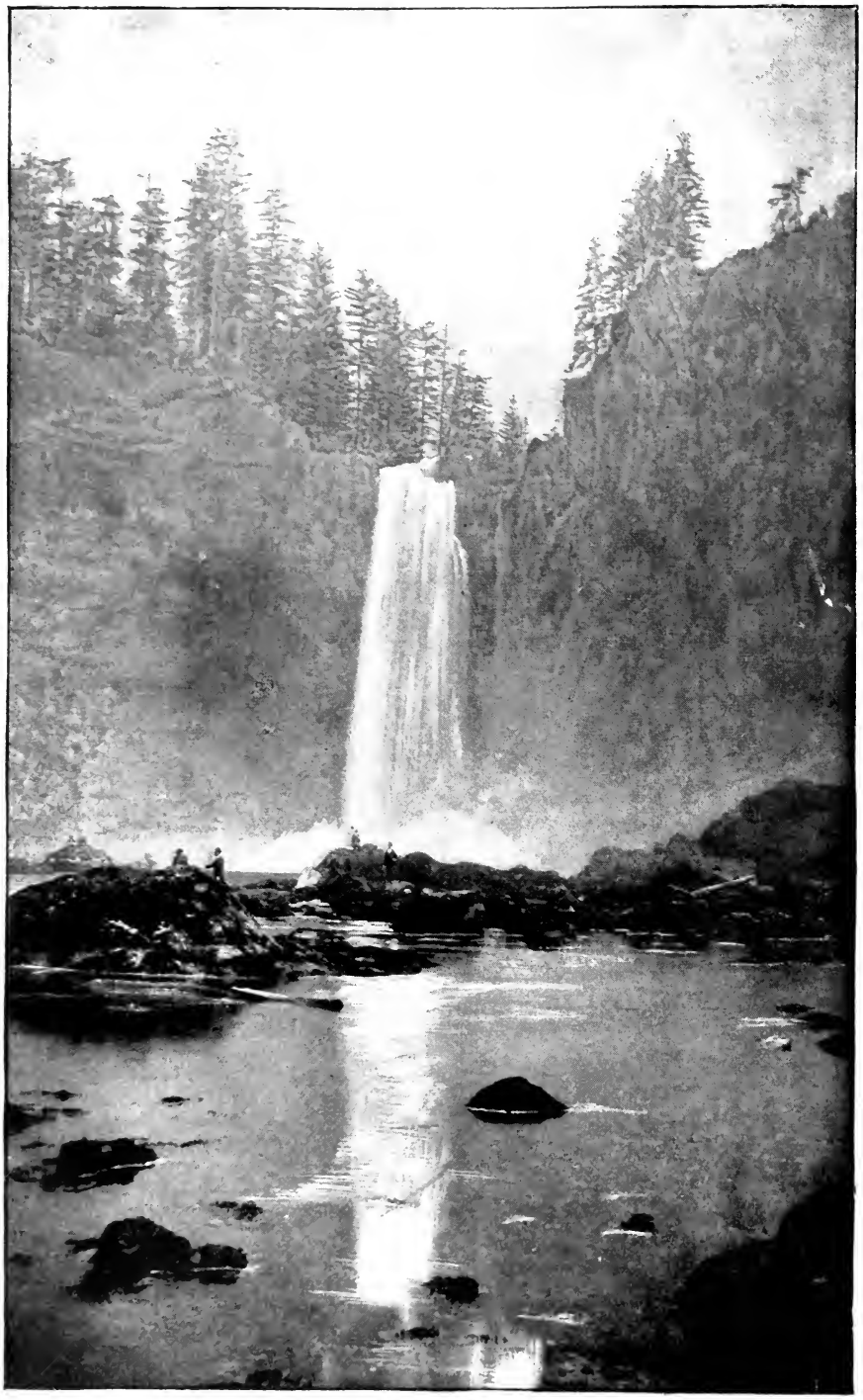
I was up betimes next morning, and making a hasty toilet as noiselessly as possible, so as not to disturb the other occupants of the car, whose somewhat audible breathing (?) indicated that they were still roaming in dreamland, I betook myself to the rear platform, camp-stool in hand, and lighting a cigar and tilting my heels upon the platform railing, prepared to enjoy such glimpses as were to be now and then caught through the dense forest-growth of the wild scenery round about—and, I might say with equal propriety, above and below. We were slowly climbing the eastern slope of the Cascades, and the view was wild and grand. Now the winding track clings to the rocky walls of a dizzy cliff, and I am permitted to gaze down into a chasm whose depth I wot not of, while my hair involuntarily assumes an erect attitude and my trembling eyelids close upon the sight. Suddenly, two giant locomotives—a double-header—dash around a curve a few rods in our rear. Springing to my feet and gazing upward toward the blue sky, whither I expect momentarily to be wending my unceremonious way, I prepare to jump for life, when, fortunately I discover that the monster locomotives are part and parcel of our own train that have just turned a "corner" and are pursuing a legitimate right-of-way. Pretty soon I become accustomed to these startling surprises, and when, by and by, the head engineer looks down from a height of fifty feet almost straight up above me and smilingly nods a morning recognition, I return the smile and toss him a Flor de Cubana with the nonchalance of a veteran in the business.

At last we reach the great tunnel under "Stampede Pass," and slowly enter its arching doorway, hewn out of the solid rock. The interior is lighted by incandescent electric-lamps attached to either wall at intervals of a few feet, and as we slowly proceed, I catch glimpses of the upturned faces of the track-walkers and tunnel-crew, for whom this marvel of engineering skill—nearly two miles in length, and the second longest tunnel in the United States—is an unremitting care.

Now our car tips slightly, but surely, forward, our speed begins to increase, and we know that we have crossed the Cascades and are descending the forest-clad slope that extends even down to the far-resounding shores of the Western Ocean. We reach the base of the mountains proper at Weston—twin sister of Easton just across the range—and frequent glimpses of dashing Green River,



YAKIMA RIVER AND CANON, WASHINGTON.

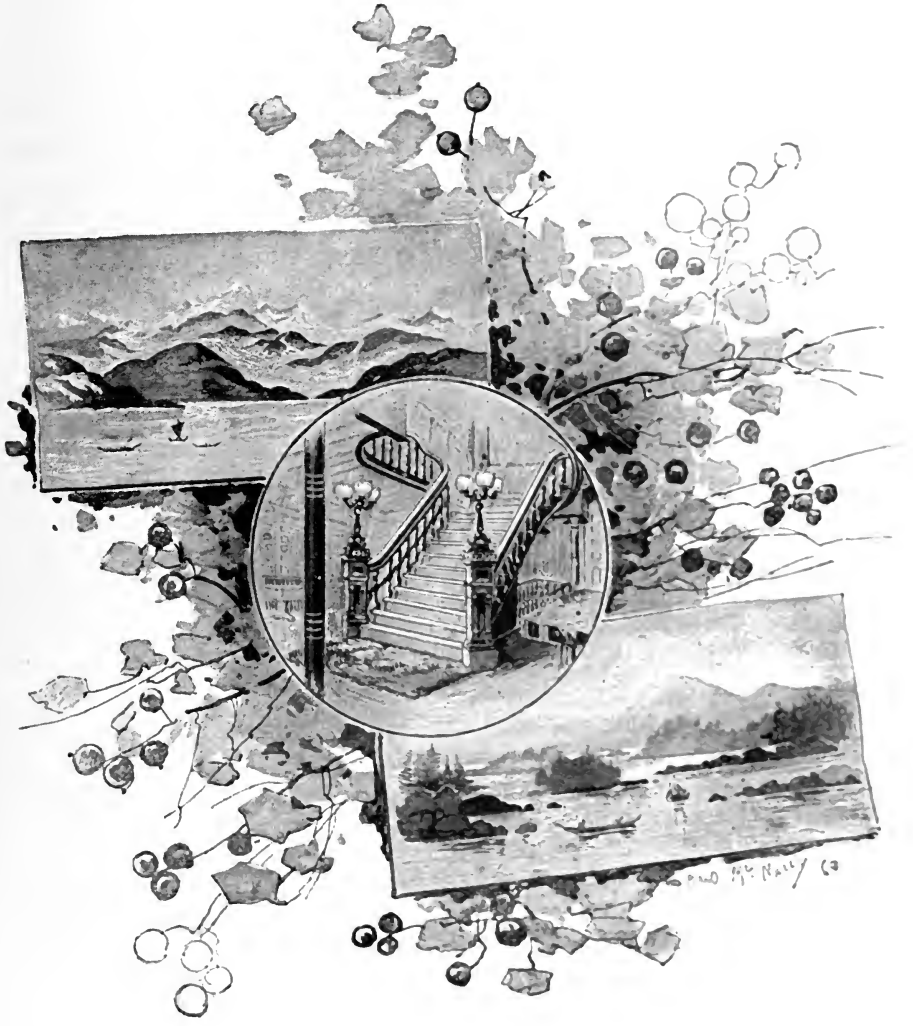


SNOQUALMIE FALLS, WASHINGTON.

along which our way winds, instantly suggests the thought of rod and flies, and I promise myself that I will explore its rapids, pools, and rocky glens on the homeward journey, come what will.

A cheery sun was fast dispelling the morning mists that hovered about the head of Commencement Bay as we drew out of a skirting belt of pines and began to cross the long trestle leading to the charming city that, like ancient Rome, sits upon its seven hills, and looks down in majestic grandeur upon the rest of the world.

Here, speaking with exactness, our roving outing actually began ; but what we did and what we saw during our coastwise sojourn will be made the theme of another chapter.



CHAPTER VI.

LOOKING ABOUT TACOMA—ITS FINE HARBOR—GROWING COMMERCE—MANUFACTURES—DELIGHTFUL HOMES—MOUNT TACOMA—JOURNEY TO PORTLAND—VALLEYS OF THE CHEHALIS, WILLAPA AND COWLITZ—TOWNS BY THE WAY—VISIT TO BIG TREES—PRAIRIES ALONG THE COWLITZ—PRODUCTIONS—CROSSING THE COLUMBIA—CITY OF PORTLAND—PUGET SOUND HOP REGION—VISIT TO MEEKER "YARDS," NEAR KENT—HOP GROWING—ARRIVAL AT SEATTLE—VIEWING THE CITY—ITS EXCELLENT HARBOR—COMMERCIAL AND MANUFACTURING IMPORTANCE—SUBURBAN LAKES—VISIT TO SNOQUALMIE FALLS—ANACORTES—SEDRO—NORTHERN PACIFIC CONNECTIONS WITH OTHER CITIES—CONNECTIONS WITH VICTORIA AND POINTS IN ALASKA.

DURING our westward journey we had, with prompt regularity, patronized the well-supplied tables of one of the best-equipped and best-officered dining-cars it has ever been my good fortune to enter, even upon the line of the Northern Pacific, whose present management seems to derive pleasure from providing everything in the way of train-service that can in any way conduce to the comfort or convenience of its patrons.

We had done this as a matter of choice merely, as the traveling-studio which we called home and business-office as well, was furnished with all the conveniences for preparing and serving meals that a French *chef* might desire. We also had with us a gentleman of color to perform the dual service of cook and porter, so that we had but to lay in a supply of ice and provisions in order to be ready for pretty nearly any emergency in that line.

While the necessary preparations incident to our proposed roving camp-out were being attended to, I took advantage of the opportunity afforded to look about Tacoma a bit, and investigate more fully some among the many apparent evidences of the city's growth since I had last strolled about its streets, and climbed its hill-sides.

I fear that as age advances, I am becoming a trifle odd in my likes and dislikes, at least in respect to the early stages of development of pretty nearly

every Western town of my acquaintance; for I never observe any considerable number of persons rushing about with real-estate plats in their hands, and surveyor's chains hanging out of their coat-tail pockets, without sooner or later being overcome by a feeling of unutterable weariness. My former visit to this surprising young city of the many-harbored Pacific Sound was full of experiences of this kind, and I felt out of place in the atmosphere of general bustle that said, in omnipresent letters of prophetic import, "If you want to be happy, buy a lot in Tacoma."

Philosophers who have carefully and thoughtfully observed the general and indiscriminating scramble for wealth and quick fortune-making characteristic of the American people, express the opinion that "town-booming" is a disease as natural to the great new West as measles is to the period of adolescence, or ingenuity to the New England Yankee; and although a very little of what passes current as philosophy in this day and generation goes a long way, generally, in supplying the needs of such a robust constitution as I am, fortunately, blessed with, yet in this instance I am inclined to accept the opinion handed down as sound, and founded both upon good law and common experience.

But to return to my text, I soon discovered, in my ramble among the hills and homes, mills and market-places, business streets and business palaces, the busy wharves and busier wharfingers of this bright, bustling, airy city, on this balmy morning of the early dog-days, that the Tacoma of my former visit had outgrown the swaddling-clothes and colicky demonstrativeness of a somewhat troublesome infancy, and developed a material growth in the direction of commerce and manufactures that can not, in the very nature of things, fail of making it some day a great metropolis, in spite of any possible temporary misfortune or set-back that may overtake it. It already has a banking capital of $7,000,000; does an annual wholesale trade of $10,000,000; has twenty hotels —one costing $250,000; a $150,000 opera-house, thirty church edifices, seven public-school buildings, three daily and several weekly newspapers, two hospital buildings, a chamber of commerce, a seminary, college, and university, an assessed valuation of $20,000,000, a population of about 40,000, and the largest saw-mill in the world. It annually converts half a billion feet of logs into building material; manufactures flour, soap, oatmeal, crackers, furniture, boxes, cornices, steam-boilers, stoves, cement, gas, electricity for lighting and supplying power, brooms, tiles, terra cotta bricks and ornamental decorations, beer, trunks, cars, carriages, and railway machinery; has five iron-foundries, ship-yards, grain warehouses, cold storage and commission houses, a smelter capable of reducing 100 tons of ore daily, a system of wharves two and one-half miles in length, coal-bunkers constructed at an outlay of $150,000, ten miles of electric street railways, and thirty miles more of city and suburban lines under construction; an excellent system of water works, and an already very large export and import trade; and is the *entrepôt* for a very large and

constantly increasing share of the trade of China and Japan that finds its way to American shores. It is the sound terminus of the Northern Pacific System, and of the various steamship companies whose ocean-rovers ply Pacific waters to and from California, British Columbia and Alaska. It sits at the head of Commencement Bay—the southeasternmost harbor of Puget Sound—and is ninety-eight miles by water-road to the open ocean at the outlet of the Strait of Fuca, and forty miles from the Pacific as the crow flies.

The foregoing data and statistics, in part culled from the very excellent press of Tacoma and in part obtained from official sources, will, it is assumed, carry with them the conviction that the assertions of opinion herein contained touching the proud eminence of commercial greatness and power that destiny has marked out for this young empire city of the Pacific Northwest, are not the mere vaporings of a too vivid imagination, nor the paid advertisement of real-estate speculators.

But I should be recreant to duty were I to neglect to mention the pleasure I experienced, after wearily climbing its roundest, steepest hill, in finding myself surrounded by delightful homes, beautiful in architectural design, and sufficiently retired from the curb of broad avenues, pleasant drives, and sightly promenades to admit of fresh, green frontage borders of well-kept lawn; of shrubbery and beds of velvety pansies; blossoming rose-buds and sweet-smelling mignonette—homes indicative not so much of the lavish hand of wealth as of cultured taste and refined domesticity; of sweet content and smiling infancy; of healthful rest and sweet repose such as weary pilgrims need.

Charming as was and is the picturesque beauty of this Palatine Hill of a newer and brighter Rome, my eyes would stray to the rippling, sapphire-tinted bosom of the bay at my feet; to the fir-clad mountain-slopes stretching beyond, and to the great, white, sepulchral dome that ever and anon appeared to view from out the filmy mists that veiled its icy brow—cold-looking, majestic, grand.

Of this same scene, mayhap, at least of the snowy Cascades and Mount Tacoma, wrote—more than a quarter-century since—Theodore Winthrop, poet, novelist, soldier—military secretary to General Butler, and numbered among the martyrs of Big Bethel:

The range continues dark and rough, and sometimes unmeaning to the eye, until it is relieved by Tacoma—*vulgo* Regnier. * * * Kingly and alone stood this majesty, without any visible comrade or consort, though far to the north and south its brethren and sisters dominated their realms, each in isolated sovereignty, rising above the pine-darkened sierra of the Cascade Mountains; above the stern chasm where the Columbia—Achilles of rivers—sweeps, short-lived and jubilant, to the sea; above the lovely vales of the Willamette and Umpqua. Of all the peaks from California to Fraser River, this one before me was royalest. Mount Regnier, Christians have dubbed it, in stupid nomenclature, perpetuating the name of somebody or nobody. More melodiously, the Siwashes call it Tacoma. * * *

No foot of man had ever trampled those pure snows. It was a virginal mountain, distant from the possibility of human approach and human inquisitiveness as a marble goddess is from human loves. Yet there was nothing unsympathetic in its isolation, or despotic in its distant majesty. But this serene loftiness was no home for any deity of those that men create. Only the thought of eternal peace arose from this heaven-upbearing monument, like incense, and, overflowing, filled the world with deep and holy calm. Wherever the mountain turned its cheek toward the sun, many fair and smiling dimples appeared, and along soft curves of snow, lines of shadow drew tracery fair as the blue veins on a child's temple. Without the infinite sweetness and charm of this kindly changefulness of form and color, there might have been oppressive awe in the presence oft his transcendent glory against the solemn blue of noon. Grace played over the surface of majesty, as a drift of rose-leaves wavers in the air before the grandeur of a storm. Loveliness was sprinkled, like a boon of blossoms, upon sublimity.

Studying the light and the majesty of Tacoma, there passed from it, and entered into my being—to dwell there evermore, by the side of many such—a thought and an image of solemn beauty, which I could thenceforth evoke whenever in the world I must have peace, or die. For such emotion, years of pilgrimage were worthily spent.

Seven-thirty A. M. of August 1st found us seated at our initial breakfast-table, our car attached to the Portland Express, just pulling out of the Tacoma yards—our coastwise ramble begun. A brief run brought us to Lake View Junction—eight miles south—from which point the Northern Pacific has recently constructed a branch line to Olympia (capital of the State, and a city of growing importance), beyond which the road is extended to connect Tacoma and Olympia with the Centralia & Gray's Harbor Line at Gate City. At 10.05 we had reached Centralia, fifty-two miles south of Tacoma, and half-way between Seattle and Portland, where our traveling art-gallery was placed upon a convenient siding to enable our artist-in-chief to procure a few negatives in the line of landscape photography, and our commissary-of-subsistence to reconnoiter the picketed precincts of a peach-orchard and negotiate for sufficient of its luscious fruit—fresh from the bending, burdened branches—to furnish forth our table for a time. That the quests of both were fruitful (literally) of results will probably be accepted by the reader as a natural, logical sequence, without doubt, cavil, or comment.

Between the Cascade and Coast Range Mountains in Western Washington, there extends a fairly deep, irregular basin, bordered by the timbered foot-hills of either range, and with general northerly trend from the wide-rolling Columbia that forms its southern boundary to the forest-shores of Puget Sound. This basin is but, in fact, the northerly continuation of the Willamette Basin in Oregon, and is covered to a great extent with a heavy growth of choice timber, though breaking here and there into stretches of beautiful and fertile prairie, and drained by a number of small streams, each possessing its own little contiguous valley of rich, deep alluvium, and filled with the music of

bird-songs and purling brooks. Chief among these streams are the Chehalis (Shē-hā'-lĭs), the Willapa, and the Cowlitz, each asserting claim to several miles of navigable waters and boasting valleys of considerable extent and of great fertility. The Chehalis has its rise in the southerly portion of the basin, and its clear, shallow waters wind along the eastern base of the Coast Range in a northwesterly direction, emptying finally into Gray's Harbor—westward from Olympia. The Willapa (Wĭll'-ā-paw) takes its rise well over toward the head-waters of the Chehalis, flows westwardly—bisecting the Coast Range—and mingles its waters with those of the fine ocean-harbor whose name it bears. Last, but by no means least, either in length or drainage area, is the Cowlitz, whose valley, explored by Captains Lewis and Clarke at the beginning of the present century, and subsequently made a trading-station by the Hudson Bay Fur Company, has its beginning away up among the snows of the Cascades—in fact, all but unites with the Valley of the Nachess (Năch-ēēz') River (to the east of the Cascades) in forming what is known as the Cowlitz or Nachess Pass of those mountains. The Cowlitz is a fairly rapid stream, flowing first westerly, then southerly, through a beautiful valley consisting of an almost unbroken succession of natural rolling prairies—its waters finally serving to augment the already mighty volume of the Columbia. Throughout this basin runs the Pacific Division of the great railroad in question—from Seattle, Tacoma and Olympia, in Washington, to Oregon's metropolis on the Willamette—a total distance of some 200 miles. In the central portion of this large mountain-basin are Centralia and Chehalis, immediately situate in the extensive and fruitful valley that gave to the latter its name.

These two thriving young cities are but four miles distant one from the other, Chehalis being the farther south, and the county seat of Lewis County, the large political subdivision of the State in which both are situated. Centralia has at present the larger population (some 3,000), but each is growing steadily and is rapidly becoming an important railway center. Already a newly built line of railway is in operation by the Northern Pacific connecting Centralia with the town of Montesano and the Gray's Harbor country, and affording the latter direct rail connection with all parts of the State and with the East, besides opening for speedy settlement a fine farming and timber region hitherto difficult of access. Another branch road is now under construction by the same company, intended to open to settlement a large area of forest and farming country lying in the Chehalis and Willapa valleys, and to give the new and rapidly growing city of South Bend and the Willapa Harbor region in general direct rail connection with the finest and most extensive railway system in the world. Chehalis has a population of about 2,500, and like its sister city is surrounded by fruit-gardens in which the pear, peach, prune, plum, and apple vie with one another in abundance of yield, and in size, beauty, and exquisite flavor. Trees usually begin to bear at two years of age, and appear to require

very little care or attention further than the so adjusting of crops beneath the heavily fruited trees during the bearing-season as to form supports sufficient to prevent the breaking down of branches and the ruin that would in consequence ensue. Both Centralia and Chehalis are largely engaged in the manufacture of lumber, shingles, sash, doors, blinds, etc.; each has excellent schools, churches, and newspapers, and the former a fine seminary. Centralia also has a mine of coal, just beginning to be developed at the time of our visit, a railway some three miles in length having already been constructed to the mine, upon which sufficient development work had been done to convince the owner of its value and justify energetic prosecution of the work begun.

The day following our arrival at Centralia, our car was run to Chehalis and preparations were made for spending a day in the forests of giant pines, firs, and cedars along the line of the newly graded railroad leading to Willapa Harbor — already referred to. Early on the morning of the 3d, a pair of mettlesome steeds, attached to a large two-seated wagon, drew up at the door of our domicile, or at least as near the door as the rails and cross-ties would admit. We were just partaking of a hasty breakfast, but were soon ready for the day's jolting over the corduroy road that served as a "tote" road, I was told, to the camp of the railway-graders. We had barely reached the region of great trees (a journey of not over sixteen miles) at 10 o'clock, and had experienced the pleasant sensation of a cool drive, away from the dust and clatter of busy streets, amid a forest of Douglas firs and an ocean of nodding wild flowers and tall, waving ferns. And here were the larger trees of which we had heard — not nearly so large as the giant redwood trees of California, it is true, yet grandly large in any ordinary collection of forest conifers. We measured several, taking their girth as high as we could reach, and found that they scaled all the way from twelve to thirty feet in circumference — large enough for all practical purposes, and apparently as solid and sound as so many new dollars.

We got back to town at early night-fall, and obtained permission to have our car attached to a passing freight-train that took us to Winlock, whence we took team, the following day, for a visit to the orchards and wheat-fields of the Cowlitz Valley, passing through Drew's and Grand prairies en route. This entire region is settled by a thrifty class of Tennesseans and Western North Carolinians, who have sought homes here for the most part since 1884.

We were picked up by a passing express, next day at about noon, and whirled on to Portland, crossing the Columbia by embarking upon a huge railway-transfer at Kalama and debarking therefrom at Goble, on the Oregon shore, arriving at the sea-port of the Willamette at 6.30. During the two following days we viewed the business and bustle of Portland, both by daylight and electric-light, and did it enthusiastically. The Northern Pacific has a corps of general officers here who prefix "assistant" to their respective titles by way of distinction from St. Paul officials in like departments. The road also enjoys

very satisfactory traffic arrangements with the Southern Pacific Company's celebrated "Shasta Route," with which it makes close connection for San Francisco and all points south along the coast.

The city consists of Portland (proper) and East Portland, and has a population of about 60,000. Its growth and progress are solidly founded upon natural advantage of position. It is situated, as every school-child knows, upon the Willamette, twelve miles above its confluence with the Columbia, and its wharves are constantly visited by the ocean-rovers of the world. It is to all intents and purposes a sea-port with an extensive ocean commerce. Regular lines of passenger-steamers ply daily along the water highways of the Willamette, Columbia, and tributary rivers, and at longer intervals to and from San Francisco.

The city is admirably laid out, and its limits may readily be extended in any direction without detriment to its compactness. Its streets are wide, well paved, and lighted by electricity; its business structures would do credit to any eastern city of thrice its size, and its churches, schools, and private residences are the admiration of every appreciative person who visits the city.

It takes a just pride in the excellence of its hotels, in its public library, its theatres, its post-office and customs buildings, its newspapers, its seven lines of street railway (cable, electric and steam-motor), its system of pure water-supply, its millions of banking capital, its large wholesale and retail trade, and its exports of wheat, wool, hides, lumber, and canned salmon.

August 7th we bade adieu to this city of pleasant memories and again turned our faces toward the "Mediterranean" of the Pacific — Puget Sound — halting not until our car was side-tracked among the green-walled "hop-yards" of Kent — on the Northern Pacific's Sound Shore Line between Tacoma and Seattle. All day long we wandered among these "yards" of ripening hops, avenues of clinging, raspy vines, dry-kilns, press-sheds, pickers' quarters, and stacked-up "picking-boxes," one and all suggestive of the fun and frolic of the "picking-season," of bilious tea, bitters, yeast-foam, and beer and pretzels. Now we paused to make a picture of some long, narrow lane, walled in by blossom-laden vines, now climbed a high railway-trestle to get a glimpse, and a camera-shot at the same time, of the billowy sea of burdened hop-poles beneath.

Then we inquired about the method and cost of raising, attendant care, picking, curing, prices realized, etc., and were kindly favored with a very concise, lucid, and withal highly entertaining account of the cares and joys of hop-growing (the industry doesn't appear to have any sorrows connected with it) by E. Meeker, Esq., one of Washington's pioneer hop-growers and hop authorities. Mr. Meeker is the author of an excellent and exhaustive treatise on "Hop-Culture in the United States;" is a gentleman of culture (speaking both literally and metaphorically) and wide experience. His home and post-

WHEAT FIELD IN THE COWLITZ VALLEY, WASHINGTON.

PUGET SOUND FOREST.

office address are at Puyallup, Wash., though he also has extensive hop-interests at Meeker and Kent—in one of his "yards" near which last-mentioned station we were at the time pursuing our investigations. In discussing the subject of hop-growing, Mr. Meeker said:

The soil here among the valleys of the Puget Sound Basin is, as anyone may see, an alluvial deposit; and that it is remarkably rich in all that produces plant-growth, the luxuriance of even wild vegetation bears ample testimony. You will probably be surprised when I tell you that we have no such thing as subsoil here, and yet I have actually experimented upon the subject, have penetrated this same rich alluvial mold to a depth of 144 feet, and found no change—nothing that might be classed as subsoil.

Hop-roots penetrate the soil to a great depth. In ditching through my "yards," I have found them very abundant at a depth of four feet, and roots nine feet in length have been seen where exposed by the wash of river-banks. A crop can be raised the first year from cuttings planted in the spring. This is not always the case in other hop-growing regions, and is accounted for from the fact that our growing-season is a long one, our soil exceedingly rich, and hop-cuttings unusually strong and vigorous. During my fifteen years' experience with the raising of hops, no enemies have appeared or disease attacked them, and growers (here) hope and believe that the peculiarities of soil and climate will always insure their hops against the ravages of disease so destructive elsewhere. Hops have been grown in these valleys continuously upon the same land for the past fifteen years, without any apparent diminution of the crop or weakening of the plants. There are hop-yards of that age without a missing hill or sign of decay. This very yard you are now inspecting is bearing its tenth crop, and see the result. Why, as matter of fact, with proper care, a hop-yard will last and flourish for centuries in this deep, rich soil.

That the cultivation of hops requires unremitting care and diligence goes without saying; the real trials of the hop-grower begin after the period of cultivation is ended—in securing the requisite help to insure the prompt picking of his crop, that, if not quickly picked, is liable to deteriorate in value. Indians do most of this work, thousands of them—coming from all parts of the coast, even from distant Alaska—being annually employed as "pickers." Many of them become very expert, picking two, and even three, boxes a day. A hop-box, standard size, holds 19½ bushels, or 100 pounds, green hops, struck measure, and $1 a box is paid for picking.

Pickers quite generally, especially Indian pickers, camp in close proximity to the "yard" in which they are employed. This enables them to get at work at daybreak, and—once at the picking—they seldom quit work until compelled to do so by darkness. These "camps" are not infrequently the scenes of quaint merry-making that would be a fine study for a painter, or call forth the best efforts of the descriptive writer and character delineator; but as a rule pickers are weary enough by night-fall, or at all events by the time they have prepared and eaten their evening meal, to retire to rest without much ceremony, and in order that they may be prepared for the labors of the morrow. Fairly expert pickers daily earn from $1 to $1.25. After picking comes the drying process; and unless great care, guided by experience, is exercised, the patient and diligent labors of the entire season may be frittered away and rendered next to valueless in a few hours.

The average yield per acre is in the neighborhood of 2,000 pounds, and the total cost, including baling and making ready for market, about $170 to $180, or about 9 cents a pound.

While the price of hops is subject every year, nearly, to wide (often wild) fluctuation, Washington hop-raisers may realize an annual net profit of $100 an acre—taking, say, ten years as a basis of estimate, and the low estimate of a 1,600-pound yield per acre.

In narrating the conversation had with Mr. Meeker, the exact reproduction is not aimed at in the foregoing, but rather the substance.

The subject of dairying was also incidentally discussed, eliciting the information that dairy products, and poultry products as well, find a ready market in any of the several cities of the Sound, all near at hand. So important has become this industry, it was learned, that the Northern Pacific has found it actually necessary to run milk-trains each morning from local stations in dairying districts to Tacoma and Seattle.

Well satisfied with our sojourn in the hop district adjacent to the Sound, we were taken in charge by the conductor of the north-bound express and given a delightful afternoon ride down the Valley of White River for a large part of the way to Seattle. I was at first greatly astonished to find so few reminders, even, of the terrible fire that only a couple of years ago blotted out almost the whole of this fair city from the map of the State. I had not been a guest within its gates above a few hours, however, before I had ceased to wonder at anything that I saw or heard. Since I have had ample time to indulge in a systematic retrospection of events which I am able to recall with tolerable distinctness as having occurred during my brief stay in this Pacific Coast phenomenon, I am led to believe that the storage-battery of what humorist Nye would probably call my "amazer" had in some way ceased to perform its accustomed functions—become paralyzed, as it were, from over-exertion. I remember being taken up into a high mountain, and being shown the kingdoms of the earth, or that which passes as a synonym for the earth in the vocabulary of the Seattle directory; of taking a ten minutes' ride on the most rapid motor-line of my acquaintance to beautiful Lake Washington, set like a turquoise gem in a circlet of low wooded hills; of visiting Lake Union and marveling at its stately suburban residences; of being informed that great beds of coal and iron ore lie at the very threshold of the city; that prolific adjacent valleys surround its hilly peninsular site, and pour their wealth of fruits, vegetables, hay, grain, and hops into its capacious and receptive lap; that it boasts one of the finest harbors on the sound, yes, in the world; that it has 45,000 progressive citizens (I don't doubt it; I should almost have been willing to make oath that there were twice that number); conveniently adjacent forests of choice timber, four railroads, fifty-one miles of street-car lines (cable and electric), two large hospitals, three daily and ten weekly newspapers, ample water-supply, a State university, fourteen school-buildings, forty-three churches, a Catholic academy, and two

standard theatres; that it is connected by almost hourly boats and trains with Tacoma; has excellent hotels, and thirty-six wholesale houses; that $14,000,000 were invested in new buildings in 1889 alone; that its manufactures aggregated ten and a half millions for the same period; that since the great fire of June 6 of that year, anyone proposing to erect anything short of a fire-proof building within the city's business limits is quite liable to receive a visit from the Board of Insanity and a *non compos mentis* inquest; that her club-men are royal entertainers—and from that on my mind is more or less of a blank.

At an early hour next morning, in company with the superintendent of the Seattle, Lake Shore & Eastern road, with which the Northern Pacific has recently effected close traffic arrangements, we were given a delightful excursion to the Falls of the Snoqualmie, just east of Seattle, and one of the most wildly picturesque cataracts of the Cascade Mountains. The quite large river emerges from the high mountain-pass of the same name, and almost immediately plunges with a thunderous roar into a sheer abyss bordered by frowning cañon-walls nearly 300 feet in depth. It is rapidly becoming a favorite resort for excursionists desiring to spend a day (only) in some convenient forest retreat—returning at eventide to the hum and humdrum of city life once more. At these falls, not only is the cool shade and solitude of primeval forests and the wild tumultuous beauty of a rival Niagara found, but the angler may while away a pleasant and successful hour with his trout-rod. After a day thus pleasantly spent, evening found us returned in safety to Seattle, once again to visit clubs and partake of—its large-hearted hospitality.

On the following day we paid Anacortes—108 miles, by rail, up the sound from Seattle—a brief visit, passing through the sprightly town of Sedro, in the Valley of the Skagit (Skăj'-ĭt), en route. Anacortes is situated upon the Island of Fidalgo, one of the many picturesque islands that well-nigh cover the northwestern portion of the sound, and is a prosperous and rapidly growing city. It possesses exceptionally fine harbor facilities; is healthful; already has an extensive commerce, and, like all other sound cities, is largely engaged in the manufacture of lumber. The Pacific Division of the Northern Pacific (known as the Portland, Tacoma, Seattle & Anacortes Line) runs north to Sumas, on the boundary, via Sedro, where connection is made for New Whatcom, Fairhaven, and other thriving cities and towns farther north. Stanch and swift steamers also ply between Tacoma, and the various ports of the sound, including New Whatcom, Port Townsend, Wash., and Victoria, B. C., in connection with the Northern Pacific, as do also steamers to and from Alaska and intermediate points. On returning from Anacortes on the evening of August 10, our car was run through to Tacoma, to enable us to obtain and dispose of accumulated mail, so as to be in readiness for an early start next morning on our leisurely homeward journey.

CHAPTER VII.

HOMEWARD BOUND — BIDDING FAREWELL TO TACOMA — HALT IN EAGLE GORGE—PHOTOGRAPHING MOUNTAIN SCENERY—TROUTING IN GREEN RIVER—THE VALLEY OF THE KITTITASS—ELLENSBURGH—THE YAKIMA CAÑON — NORTH YAKIMA AND THE YAKIMA VALLEY — SPOKANE — THE BIG BEND COUNTRY — THE PALOUSE COUNTRY — THE OKANOGAN AND CŒUR D'ALENE MINING REGIONS — EXCURSION ON PEND D'OREILLE LAKE—JOURNEYING UP THE CLARK FORK—THOMPSON FALLS AND HORSE PLAINS—MISSOULA AND VICINITY—VISIT TO PHILIPSBURG AND THE GRANITE MOUNTAIN SILVER-MINES—MINING AND ORE-REDUCTION — BROADWATER HOTEL AND NATATORIUM — HELENA—BUTTE—ANACONDA—DEER LODGE—BUTTE "AIR LINE"—BOZEMAN.

ALTHOUGH I had been kept busy with pen and pencil until past midnight of the 10th, I was up and about—ready to begin the labors of the day—when the Atlantic Express left Tacoma at 7 o'clock on the morning of August 11th; and, standing on the rear platform, as the heavy train rumbled over the long trestle spanning the head of Commencement Bay, gazed long and wistfully at the red-walled city within whose gates I had been as a brother—not a stranger.

There seems to be a certain something—hypnotic, almost in its influence—pervading the balmy air of the Pacific Coast, from Victoria southward, that charms even the casual wayfarer, and makes him ready to exclaim:

> "This is the way I long have sought,
> And mourned because I found it not."

This influence I felt most powerfully; felt as one feels when bidding adieu to the blue rolling hills of childhood's home— to journey in distant lands. I was glad to be alone; glad of the opportunity to take—alone and undisturbed—a last lingering look at the shifting panorama of homes and roof-trees, mills and market-places, blue, forest-fringed bay, and the white-winged ships and

PUYALLUP VALLEY HOP FIELDS, WASHINGTON.

STREET VIEW IN TACOMA, WASHINGTON.

gliding steamers that floated upon its almost motionless bosom like stately swans upon a sea of glass.

Now a bending of the great highway, along which we are speeding, and an intervening curtain of pines, rudely suggest that sufficient time has been afforded for sentiment, and that exacting duty demands—here and now—undivided attention and earnest effort.

As we journey eastward up the fruitful, hop-ful valley of the milky-hued Puyallup, I am far better prepared to comprehend and appreciate the vast and rapidly developing agricultural wealth of Trans-Cascade Washington than when, twelve days before, I climbed that dark, forest-clad mountain-wall now once again stretching before us, and with light heart descended to the sea.

At Eagle Gorge, near the base of the Cascades, our studio was placed upon a siding to await a later train, and to enable our artist to procure a few desired negatives of foaming, plunging cascades and rocky mountain-glen. It is a wild region indeed ; just a solitary section-house and bit of winding track, a narrow, dashing river, a stretch of babbling, foam-flecked rapids, in a wild forest-glen, through whose shadowing pines the morning sun sends his slanting beams to glint upon the smooth steel rails and play among the luxuriant ferns that grow in feathery profusion upon the river-brink—"only this and nothing more."

Through the courtesy of the roadmaster of the "division," we found the crew of the section—five Chinamen, "bossed" by a jolly, quick-witted Irishman—with hand-car in readiness to take us to any point on their section where it might be desirable to employ the camera, and inconvenient to reach otherwise. This was my first experience with Chinese railway-laborers, and I smiled at the novelty of their attire—cloth shoes, white stockings, blue drilling "bloomers," and overshirt of the same material—wide of flap and unconfined—the whole surmounted by a broad, dish-shaped, circular hat of plaited cane-straw. But if their attire was calculated to inspire merriment, their actions and odd jargon—profusely intermingled with, to me, meaningless gestures—as the large camera, plates, and tripod were brought out and placed upon the pump-handled car, were really amusing.

Naturally, I concluded that they were wondering what the large boxes—so carefully handled—contained ; but the sequel proved that "John" had been there before sometime, and was by no means entirely unacquainted with the picture-making profession. We had reached a spot where a high mountain-crag overhung a curving bit of track, near a short trestle, under which ran a sparkling brook. Here the hand-car was stopped, and camera placed in position to take in all these important elements of railway landscape photography, when it occurred to the artist that the picture would be improved by having the hand-car and crew take a position as if just rounding the curve in the natural pursuit of their daily vocation. The foreman being advised of this, at

once had the car placed in the desired position, and the laborers posed in satisfactory form, when, just as the photographer put his head under the "dark-cloth" to adjust his lens, the Chinamen scattered to cover like a covey of frightened partridges. This unlooked-for proceeding surprised me greatly, as it evidently did the Celt; but Mr. Haynes only smiled, and walking toward the deserted car, called to the hiding Celestials, "Mellican man no catchee;" whereupon Sam Hop, one of the laborers, who understood a little English, came forward, and, by dint of many gestures and patient reiteration, became convinced that the artist really meant the laborers no harm, and at a signal from him the others came straggling in, silent and sheepish-looking. The artist explained that these Chinese had doubtless been smuggled into the United States in violation of the Chinese Exclusion Act, and were afraid their pictures were about to be taken for purposes of identification in order to secure their return to the Celestial Empire.

Our picture-making for the day was concluded by mid-afternoon, and we returned to our car to await the train that should take us across the mountains and down the Valley of the Yakima to Ellensburgh. Here was an opportunity to try the trout, and both the artist and I availed ourselves of it. Though the fish caught were none of them very large — running from the size of common brook-trout to quarter-pounders — I fail to recall an experience with livelier biters. Pretty nearly every cast brought a strike, and often two and three of the plump, speckled beauties would be hooked and landed at a cast. A couple of hours' sport yielded a net result of sixty-seven to the two rods, and I doubt if the distance traveled by both exceeded a mile.

In due time, we were taken in charge by a passing freight and placed on a siding at Ellensburgh, one of the chief and thriving cities of the Columbia Basin — distant from Tacoma 125 miles. Ellensburgh is the county seat of Kittitass County, situated in the Valley of the Kittitass River, a mile or so from its junction with the Yakima. The Kittitass Valley is about twenty miles in length by from ten to fifteen miles in width, about two-thirds of its area requiring irrigation as an incident to crop-production. The soil is adapted to the growing of cereals, and considerable stock, also, is raised. Ellensburgh is the headquarters of the Cascade Division of the Northern Pacific, and a city of some 3,500 population. It has a good water-power, flouring-mills, saw-mills, planing-mills, a foundry, several good hotels, two banks, three newspapers, etc., and is the center of quite a large area of mining country, embracing gold, silver, copper and coal. The rich mines of the Okanogan district are but sixty miles north.

It is thirty-seven miles by rail from Ellensburgh to North Yakima, the route lying for the greater part of the way through the picturesque Yakima Cañon — so-called.

North Yakima, situated near the eastern entrance to this cañon, in the Valley of the Yakima River (at its junction with the Nachess), has a population

of about 2,700, and is a pretty and thriving city. It is the trade-center of a large area of country productive of grain, hops, fruit, hay, and vegetables, and considerable stock is raised in the neighborhood. The city has a flouring-mill and saw-mill, water-works, electric-lights, excellent schools, hotels, newspapers, churches, and banking-houses. Fruits and vegetables of the finest quality and flavor are readily grown throughout the Yakima Valley, and the yield is remarkably abundant. The writer visited the large orchard of Sheriff Lesh, adjoining the city, and was simply astounded at what he saw. Hundreds of trees — pear, peach, apple and plum — were literally breaking down under their weight of fruit, then rapidly maturing. Early fall apples lay scattered on the ground by the dozens of bushels, rapidly going to decay, simply from inadequate means of handling. Mr. Lesh stated that he had been for several weeks expecting the arrival, daily, of a large cider-mill, which, had it been received in time, would probably have enabled him to handle his crop without loss. One small peach-tree (only three years old, and yet had borne two crops) was pointed out from which $30 worth of early fruit had been sold to city dealers. A visit was also paid to the residence and garden of Colonel Howlett, late receiver of the United States Land Office at North Yakima, and a large, deliciously flavored, native-grown water-melon partaken of. The Colonel is also making a fine start in the way of grape-culture.

Tobacco-growing is likewise being gradually developed as an industry, and with great success. The Yakima is one of the important tributaries of the Columbia, and its valley is 160 miles in length by from three to twenty miles in width.

The distance from North Yakima to Spokane is — by the Northern Pacific — 235 miles, the principal points by the way being Pasco Junction, Ritzville, Sprague and Cheney. The first-named is the junction-point of the main line of the Northern Pacific with the line running to Portland via Wallula Junction and the Columbia River. It is situated about two miles from the confluence of the Snake and Columbia rivers, is the county seat of Franklin County, and has a population of about 1,000. The surrounding country is well adapted to stock-raising.

Hither converges the so-called Hunt system of railroads, which traverse the fair and fruitful Valley of the Walla Walla, and the Umatilla region to the south, the chief cities of which are Walla Walla, county seat of Walla Walla County, and a beautiful city of 7,000 population; Dayton, county seat of Columbia County, and a growing town of 2,000 inhabitants; and Pendleton, county seat of Umatilla County, population about 3,000. This is really one of the very finest fruit, wheat, and stock regions in the entire State, or in the West.

Ritzville is forty-five miles still farther east, and is the county seat of Adams County. It is located in the midst of a good agricultural and grazing section, and has a population of some 500.

Sprague is an important town of 2,000 population, the county seat of Lincoln County and headquarters of the Idaho Division of the Northern Pacific. It has a flouring-mill, electric-light plant, water-works, machine-shops, planing-mill, lumber-yards, two school-buildings, four churches, and is surrounded by a good farming and stock country.

Cheney is twenty-five miles east of Sprague and sixteen miles west of Spokane. It is situated in Spokane County, upon the elevated plateau of the Columbia Basin, being 2,300 feet above the level of the sea. It has a large flouring-mill and water-works; is lighted, as becomes the bustling towns of the West, by electricity; has 1,200 population, or thereabouts, and is surrounded by several lakes and an excellent farming and grazing section.

We awoke in Spokane on the morning of August 13th, our car having been brought through from North Yakima during the previous night.

By way of showing due appreciation of city life, and to afford opportunity for the thorough dusting and cleansing of our traveling-quarters, we breakfasted at the elegant Hotel Spokane and made that headquarters during our two-days' stay in this beautiful falls city. Spokane is credited, I believe, with only some 26,000 inhabitants by Superintendent Porter's census of 1890; but, to a casual observer, the city's actual population would seem to be considerably greater. It occupies a beautiful plateau site on either bank of the clear, dashing Spokane River, immediately adjoining a series of quite grand cascade-like falls that have an aggregate descent of 150 feet in the space of half a mile, and are estimated as capable of developing upward of 200,000 horse-power. It would be difficult to conceive a water-fall whose immense power could be more easily and inexpensively utilized, and as the river never freezes and its volume continues about the same the year round, this utility is greatly enhanced. On August 5, 1889 (barely two years prior to our visit), the entire business portion of the city was destroyed by fire, entailing a loss of nearly $10,000,000; yet in one short year that blackened space had been covered by commercial houses artistic in design, and both substantial and palatial in structure—the bare cost of these new buildings alone exceeding the value of all property burned by $3,000,000 or more. Such is the enterprise of Spokane —"the great gateway to a northwestern empire of endless resources and the grandest possibilities." Spokane, in addition to its other railroad facilities, is the terminal point of several branch lines of the Northern Pacific. The Spokane & Northern, an independent line, runs northward through a combined farming and mining region to Colville, Marcus, Kettle Falls, and the Little Dalles of the Columbia; the Northern Pacific's Central Washington Branch runs westward—124 miles—to Wilbur, Almira, and Coulee City, in the Big Bend region of the Columbia, and well toward Lake Chelan and the rich mines of Okanogan County; the Spokane Branch to Medical Lake and Davenport—fifty-one miles west; the Spokane & Palouse Branch south (via Marshall

SOUTH BEND, WASHINGTON.

DRIVING ON THE BEACH AT EDGEWATER, WASHINGTON.

Junction) to Oakesdale, Belmont, Farmington, Garfield—connecting with Colfax—Palouse City, Pullman, and Uniontown (in Southeastern Washington), and Moscow, Genesee, Lewiston, and Julietta, across the state-line in Idaho—a total distance of 150 miles; and the Spokane & Idaho Branch eastward to Cœur d'Alene City, and by steamer across the lake and up the river of the same name to Mission; thence to Wallace, Burke, and Mullan, the three great mining centers of the marvelously rich and rapidly developing Cœur d'Alene mining district—an aggregate distance of a trifle less than 100 miles. Space and the reader's patience would scarce suffice for an exhaustive enumeration of all the varied interests of this young giant city, just hesitating upon the threshold of a wonderfully grand manufacturing and commercial future—a city surrounded by vast forests of valuable timber, noble mountains, picturesque lakes, and fruitful vales.

Among the numerous farming and stock-raising sections naturally or directly tributary to her doors are several favored fruit regions that yield the horticulturist large and certain returns for his labor, and others—like the Palouse Country—where cereals develop a phenomenal growth. This last-named and extensive region is worthy of more particular and specific mention and identification beyond the mere—to many—meaningless phrase "Palouse Country." This term is employed to designate the entire belt of rolling and hilly prairie country which begins just south of the fairly considerable stretch of timber through which the main line of the Northern Pacific runs from Spokane to Sprague, and extends south and southwest to the Snake River. This entire section possesses a remarkably fertile soil, and has an average width of some fifty miles, with an extreme length(reckoning from Spokane to the Blue Mountains beyond Walla Walla) of 250 miles. It enjoys an annual rainfall amply sufficient to insure the maturing of crops without irrigation; has a margin of foot-hills covered with forest-growth, and pasture-lands in abundance. The surface of the country is an endless succession of low, rounded hills and small valleys. The only really level lands lie along the water-courses, of which there are many—constantly supplied with pure, clear, healthful water from the surrounding mountains. The Palouse River, one of the main feeders of the Snake, drains, together with its numerous branches and tributaries, the very heart of this vast region—hence the origin of the term "Palouse Country."

Wheat is the great staple of this region, which is to Washington what the famous and only Red River Valley is to North Dakota. Horses and cattle are also raised here on a grand scale, and sheep to a considerable extent.

We left Spokane at 6.35 on the morning of August 15th, proceeding direct to Hope, Idaho, eighty-five miles east, arriving at 10 o'clock, to find a trim little steamer in waiting to give us an excursion upon grandly beautiful, charmingly picturesque Lake Pend d'Oreille. Like its sister lakes, Cœur d'Alene—

just across the forest-mantled mountain-chain to the south—and delightful Yellowstone—nestling in the shadows of the glacier-tipped, blue domes of the National Park, this exquisite gem of the "Rockies," if situated near any one of the great centers of North America's population, would have its praises sung by myriad tongues, until the gaping world would speedily come to believe that another such ne'er reflected the rosy blush of morn, nor the twinkling stars of dewy eve.

It is a pleasure to note, however, that both these liquid sapphires of the Idaho mountains—

> "Where sylphs ride round on ev'ry breeze,
> And naiads dwell in brooks and fountains,"

are beginning to attract summer dwellers to their sylvan shores. Several cottagers from Butte, Helena, and Spokane have already erected charming villas at one or the other of these cool retreats; others are catching the infection, and the hotels at the little lake-side towns of Hope and Cœur d'Alene City are often taxed to their utmost in the accommodation of tourist guests.

We bade adieu to Lake Pend d'Oreille and our kind entertainers at 8 o'clock that evening, and spent the five succeeding days in leisurely journeying up the Clark Fork, photographing the landscape, and occasionally, as opportunity offered, tempting its large, gamy trout with an assortment of "brown hackles," "red ibises," and "professors" that would have tinged old Uncle Isaak Walton's solemn, meditative countenance a perfectly lovely Nile-green.

Thompson Falls and Horse Plains are the only towns of even passing importance between Hope and Missoula, and they have each a population of only two or three hundred.

Missoula is situated in the northwest basin of Montana, in the midst of a most excellent combined farming and grazing region, no less than three extensive valleys radiating from its surrounding plain as from a common center. These valleys are the Bitter Root, which winds away to the southward, for 100 miles, to the Mineral Hill mining region, and varies in width from two to ten miles; the Missoula, which extends westward for a distance of seventy miles, and with an average width of some three or four miles; and, lastly, the Big Blackfoot, stretching away toward the northeast for about the same distance.

Missoula already has a population of about 6,500, and is the only city of considerable size between Helena, 124 miles east, and Spokane, 230 miles west. Its triple-valley region (barely 3,000 feet above the sea) is, with the exception of the Lower Yellowstone Valley, the least elevated of all the farming-lands of Montana.

It has a good water-power, daily newspapers, street-cars, electric-lights, four school-buildings, five churches, three banks, and homes that would grace St. Paul or Minneapolis. It is the headquarters of the Rocky Mountain Divi-

sion of the Northern Pacific, which has an excellent hospital located here, and runs a branch (the Missoula & Bitter Root Valley Branch) to Grantsdale, fifty miles south.

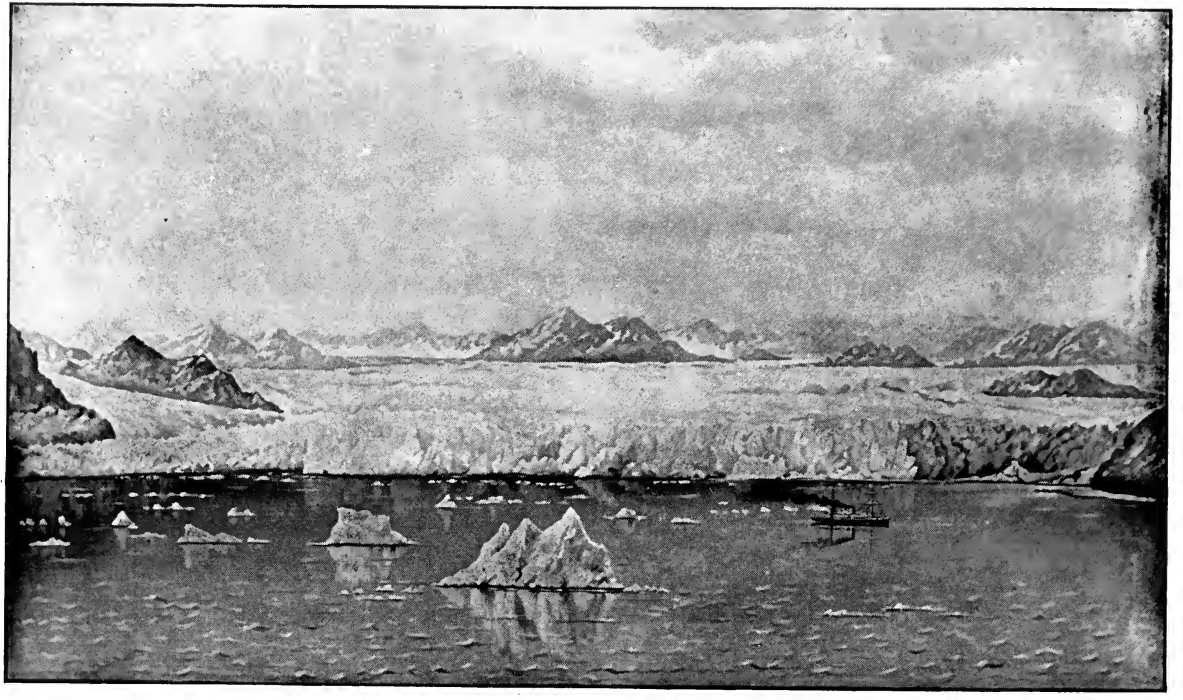
Drummond, fifty-three miles east of Missoula, is the diverging-point of the Drummond & Philipsburg Branch of the Northern Pacific, extending to Philipsburg and Rumsey, at the base of Granite Mountain — thirty-one miles. Granite Mountain is in reality, one might say, a mountain of silver; its "Granite Mountain" and "Bi-metallic" mines being the most celebrated silver-producers in the world. It is four miles by wagon-road from Philipsburg, at the base of the mountain, to its summit, where the mines are being worked. We were given the pleasure of a day's excursion to these noted mines, August 20th, as the especial guests of Paul A. Fusz, president of the Bi-Metallic Company, who entertained us right royally and gave us *carte blanche* to visit mine and mill and to extend our rambles as much as one can who suddenly finds himself groping about in the bowels of the earth with only a sputtering tallow-dip to guide his stumbling foot-steps. Indeed it is a revelation to visit this gigantic bee-hive of mining industry. Upon the crest of this great mountain — 7,200 feet above the sea — is the little city of Granite — population 1,500 — with its gravity-pressure supply of pure water; its inevitable electric-lights; its fine public school, three churches, hospital, reading-rooms, and brass-band. The men, of course, for the most part labor, in one capacity or another, in the mines, hoisting-works, and saw-mills at the summit. But what shall I say of this great treasure-house of silver through whose dark, damp, narrow halls I wandered in open-mouthed wonder? Let us start at the main hoisting-shaft, roofed over and arched above by a great wooden hoisting-works building, almost as big as Tammany Hall, and quite as busy, though lacking a trifle of the latter's war-paint and feathers. Stepping into an empty cage by the side of genial (jolly in fact) Superintendent Risque, who played the rôle of guide and instructor-in-chief, we pressed the button and the watchful engineer did the rest — shooting us down to the 1,150-foot level quicker than you could say Jack Robinson. I beg pardon — John Robinson.

Leaving the cage to its own reflections, we groped our slippery, stumbling way, with lighted (part of the time) candles, to where the miners were at work with pick and drill "drifting" into and along a vein of ore that had a dull metallic lustre, but aside from that bore no striking resemblance to the coin of the realm. After spending the greater part of an hour under ground, inspecting the various "drifts," "levels," "cross-cuts," and the powerful pumps that keep the mine free from water, we returned to the surface and followed the ore we had seen mined, and which was being brought up the deep, dark shafts in little box-shaped iron cars, through its several processes of reduction. It is first crushed by being fed upon a slanting, bridge-like arrangement, about three or four feet in width, and provided with a heavy plate of corrugated cast-

iron. This bridge is forced to move up and down and back and forth against a solid iron-faced wall in such a way that lumps of ore larger than a man's closed hand are broken and crushed to fragments before they can drop between the end of the bridge, or "crusher," and the adjacent wall into the receiving-bin just below. From this receiving bin, it is allowed to drop into iron buckets (each holding 500 pounds) attached at regular intervals to an endless, moving wire cable, that fits into the concave rim of an immense horizontal wheel, and runs from the "hoisting-works" to the mill at the base of the mountain, where a duplicate wheel stands on the top or "receiving" floor of the mill. The loaded buckets descend from the "crusher" to the mill on one side of this tram-way, their combined momentum serving not only to carry back up the mountain the empty buckets attached to the other side of the long cable, but also to generate sufficient power to crush the ore.

Once received at the mill, the ore is dumped into large receiving-bins and fed, as required, to the steel "stamps" on the floor below, where it is pulverized into powder. The now powdered ore is next mixed with from 10 to 14 per cent. (of its bulk) of rock-salt, and allowed to descend to a still lower floor, into a receptacle whose small iron spout delivers it, gradually, to the large revolving "roasting-drums," in which it is thoroughly "roasted." This is accomplished by having large wood-furnaces at one end of the cylindrical drums—supported in a horizontal position—and draught-flues at the other end, resulting in drawing the flames through the drums in such a way that the powdered ore and salt, which cling for a time to their walls, may finally drop into and through the flames repeatedly, or until to an observer at the "peep-hole" they resemble red-hot ashes. This roasting is done to drive off the sulphur with which the metals contained in the powdered ore are, up to this point, united in the form of sulphides of silver, gold, etc. As the ultimate process (employed in the Bi-metallic mill) of separating the metals from the "gangue," or worthless rock-material that, as a matter of course, forms the greater part of the triturated powder, consists in collecting them by direct contact with quicksilver (amalgamation), and as quicksilver has an affinity for metallic chlorides, but not for metallic sulphides, it follows that the character of the metal compounds contained in the powdered ore must be changed to meet the conditions of amalgamation, or that some other process of separation must be resorted to. The changing of the character of the metals from sulphides to chlorides is largely effected in the roasting-drums, where the sulphur in combination with the various metals present is (literally) *roasted out*, and driven off out of the draught-flues, the roasting of the salt present at the same time resulting in setting free its chlorine, which mingles freely with the powdered metals, and, to a very great extent, takes the place of the expelled sulphur. The furnace-drums in which this roasting is done are provided with raised strips, or conveyors, which run round and round them in spiral form, and grad-

BATHING ON NORTH PACIFIC COAST, WASHINGTON.



MUIR GLACIER, ALASKA.

ually convey the ore-powder from the end of the drum at which it enters to the furnace end, where it is permitted to escape to cemented "cooling-bins" on the next lower floor.

Here the powdered and roasted ore lies like a great heap of fine, blackish ashes for the space of four or five days, during which the process of chlorination goes on, and becomes more perfect. Then it is conveyed to the iron amalgamating-tubs, or "pans," as they are called, each as large as a half-hogshead. These pans are operated in much the same manner that ice-cream freezers are, each being furnished with an upright central shaft, connected with gearing overhead, that causes it to revolve as rapidly as desired. Each shaft is provided with slightly curved lateral arms ("mullers") which stir and mingle the ore-powder with the water, which is added as soon as a pan is "charged," and the stirring is kept up until the contents of the pan are of about the consistency of whitewash—or rather *blackwash*—when a small quantity of quicksilver is poured into the pan, and the stirring continued until it is reasonably certain that every particle of metal present has come in contact with and been gathered up by the mercury. This is amalgamation; and when the process is complete, the muddy water is allowed to drain off, and the amalgam removed from the pan and retorted. By this process the quicksilver is once more set free, passing off as vapor and being condensed by being passed through water-jacketed pipes at whose down-hill end there are metal cups in which to catch and save it for future use. The residuum of metal—gold, silver, lead, and what-not—left in the retort is now melted and cast into bullion-bars (each weighing 145 pounds), and shipped to eastern refineries, where the different metals are separated one from the other and purified or refined.

Anything like an accurate idea of the mineral wealth of Montana is as impossible of formation as a correct estimate of infinity itself. Statistics tell us that the annual "output" is constantly increasing, and that it reached the enormous bullion value of $50,000,000 for the year 1891. We know, too, that the work of development is just begun. Further than this we know absolutely nothing, and may only browse around the "common" of conjecture.

Take, for example, this mountain of silver-veined granite. The Granite Mountain Mining Company paid its first dividend April 8, 1885. It now treats 250 tons of ore daily, yields 350,000 ounces of silver monthly, and has produced more than $18,000,000 in mineral wealth. The Bi-Metallic Company's properties are of more recent development. Its first dividend was paid only in July, 1889, and yet its monthly output has already reached the startling proportions of 150,000 ounces of silver, with every prospect of an enormous increase as the months roll on.

We breakfasted under the glare of incandescent lamps at mine headquarters, at the "summit," on the morning of August 21st; and the stars were yet twinkling in the blue above as we wound our way at a good round pace down the

famous mountain to Philipsburg. This is a well-built mining town of 2,000 population, situated, as already stated, in the shadow of Granite Mountain and at the head of the pretty little Valley of the Flint River, down which the railroad runs to Drummond.

We arrived at the Hotel Broadwater (Helena's noted suburban retreat, connected with the city by quarter-hourly steam-motor and electric trains) in time for luncheon, and a stroll about the spacious grounds and great natatorium before dinner. If there is a more delightful or healthful mountain resort within the domains of Uncle Samuel, I should like to be apprised of the fact, in order that I may impart the information to Montana's great Democratic sachem by early post.

Nineteen years ago, Col. C. A. Broadwater, one of Helena's foremost men of enterprise, became the sole owner of the healing mineral springs now known to the world as the "Helena Hot Springs." With an eye to conferring an inestimable boon upon humanity, and incidentally, it may be presumed, to the designing of a monument that should add to the fair fame of the city with whose upbuilding and advancement the best years of a busy life have been occupied, he, some three years since, began the building of a palatial hotel and aquatic theatre, that, together with the construction of a small artificial lake near at hand, the erection of fountains, and beautifying of grounds, have cost a cool half-million.

That this great sum has been judiciously expended, the visitor, though a stranger to the genial Colonel's reputed business thrift (and very possibly, also, not upon terms of familiarity, bordering upon intimacy, with bank accounts characterized by such charmingly romantic *embonpoint*), would scarce find occasion to doubt. The large, broad-verandaed, cottage-planned hotel is indeed a gem; and that it is supplied with every convenience that modern thought and ingenuity could suggest would naturally be inferred. Every room is supplied with hot mineral water, and the private mineral baths connected with the house are exceptionally fine, even for a resort where bathing is a feature of leading interest. Some idea of their elegance may be suggested by the fact that every one of the numerous bath-tubs is of solid porcelain, pleasingly decorated, and imported from Europe at a cost of $250 each.

Both the ladies' and gentlemen's bathing-apartments are also provided with shower, vapor, and spray baths. I care not to dwell at length, however, upon the hotel, airy, well-appointed, and restful as it is.

Facing its main entrance—but a few rods distant—and reached by tree-embowered and flower-skirted walks, is the marvel of nineteenth century swimming-baths — the Broadwater Natatorium — open to the public day and evening.

It is said to have been designed to be the largest and most nearly perfect structure of its kind in the world—and it occurs to me, as a matter of private

opinion, that the designer probably understood his business, and that the builder followed his plans with scrupulous nicety.

The great twin-towered building is of Moorish architecture, 150 x 350 feet in size, 100 feet to the crowning roof, with towers half as high again. The roof is supported upon circular trusses, leaving the large interior entirely free from column or support that might obstruct the view. It is lighted by 20,000 square feet of colored cathedral glass by day and a multitude of electric-lamps by night. A full million gallons of hot mineral water run through it daily, half as much cold spring water being required to temper this scalding flood for the use of bathers. The hot water bubbles up through a small geyser-cone, being caught in a shallow fountain-like basin, into which tumbles a sparkling cascade of cold water from a forty-foot seeming precipice of vine-entwined, moss-grown granite. The swimming-pool is 100 x 300 feet in size, constructed of stone and cement, the tempered spring overflow keeping it constantly supplied with ever-changing water. It varies in depth from two to twelve feet, and is surrounded by a railed promenade ten feet in width, upon which 100 large steam-heated dressing-rooms open. A careful analysis of the waters of these springs shows that they are almost identical in character with those of the celebrated hot springs of Arkansas.

Helena, the handsome capital city of silver-zoned Montana, is likewise the county seat of Lewis and Clarke County. Its site occupies either bank of a sloping ravine at the head of picturesque Prickly Pear Valley—twelve by twenty miles in extent—surrounded on nearly every hand by noble mountain-chains and towering snow-capped peaks. It has a population of 14,000 or more, and is the commercial and financial center of the State. Hither converge all the stage and express routes and telegraph and railway lines of Montana.

Helena has seven banking-houses, whose capital, surplus, and undivided profits are the admiration of the financial world. It also enjoys the proud distinction of being the wealthiest city either in America or in the world at large—its per capita bank deposits, capital, etc., being greater than those of any other town or city. It is likewise, in large measure, the center of the retail and jobbing trade of the State, having ten wholesale and retail grocery houses, three large dry-goods houses, four large hardware-stores, one crockery and notion house, three stores, each carrying a large and varied line of boots and shoes, seven clothing-houses, four drug and three furniture houses, four saddlery and harness stores, etc. In the way of manufactures, it boasts foundries, breweries, a large ore-smelter, saw, grist, and planing mills, wagon-factories, and like industries. The city is well supplied with pure water brought from distant mountain streams; with electrical plants for illuminating purposes and for generating motive power; a convenient telephone exchange; ample street railway facilities (operated both by steam and electricity), and is situated in the very heart of the richest mining region thus far discovered. Within a radius of

twenty-five miles are no less then 3,000 gold and silver bearing lodes, claims to which have already been recorded agreeably with mining laws and regulations; and new ones are being discovered almost daily.

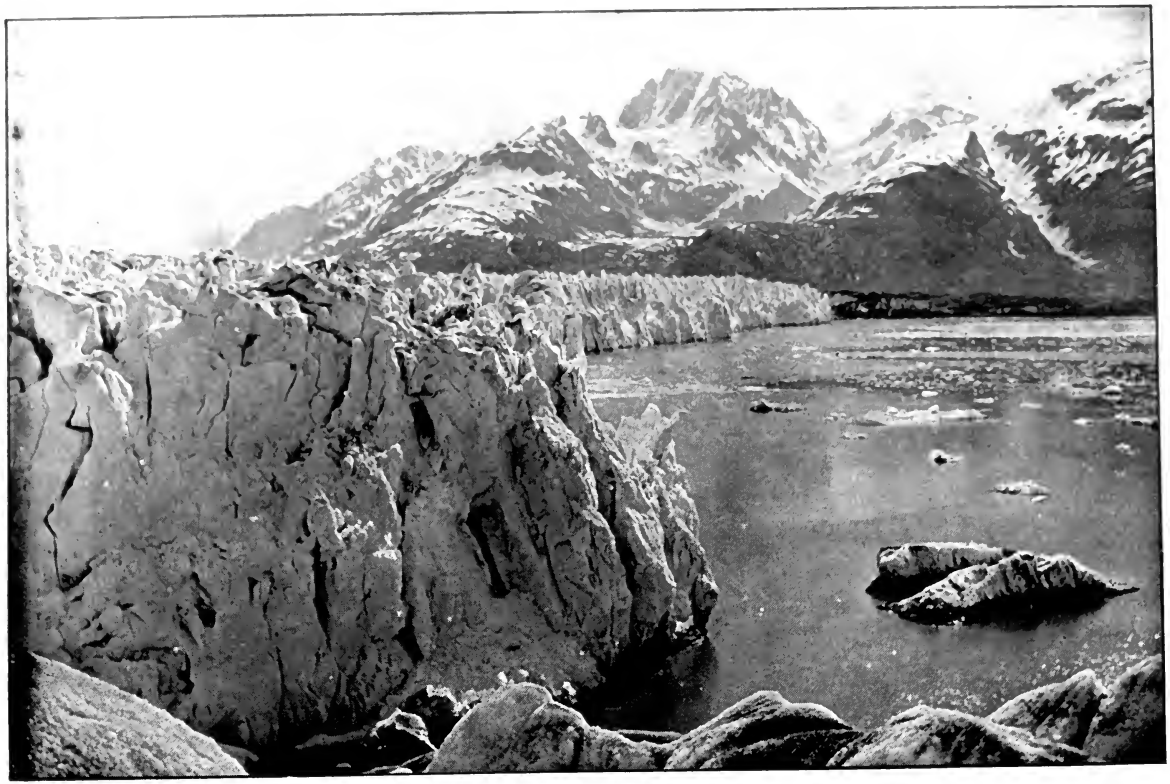
Late in the afternoon of August 25th, our car was run down to Logan—seventy-four miles east—and we spent a couple of hours most pleasantly trout-fishing in the clear waters of the West Gallatin. Early next morning we were "picked up" by the local express running between Bozeman and Butte, and paid a brief visit to the world's greatest mining city.

BUTTE—the capital of Silver Bow County—is built about the sides of a sloping hill or butte (būte)—whence its name—that is sunk so full of mining-shafts, and dotted with such great heaps of refuse gangue from the ore-mills, as to almost resemble a giant ant-hill. It lies right under the shadow of the main "divide" of the Rockies (on its west slope), at the very head and source almost of the Clark Fork of the Columbia, here designated as the Silver Bow. That it is *the* great mining-camp of the world everybody knows. It is more than a mere "camp;" it is a great and growing city, having (including its suburbs) a population of not far short of 30,000. The most famous combined silver and copper mining properties ever developed are here hoisting and stamping, roasting and treating ores that pour a steadily increasing stream of mineral wealth into the laps of owners, miners, tradesmen, and mechanics concerning which the world at large realizes next to nothing. Think of it! A single year's output of these mines (almost within the corporate limits of this city of many mills) piled up in one enormous heap of gold, silver, copper, lead, etc., would increase your bank account by thirty millions, and these Butteites have only just fairly gotten under way.

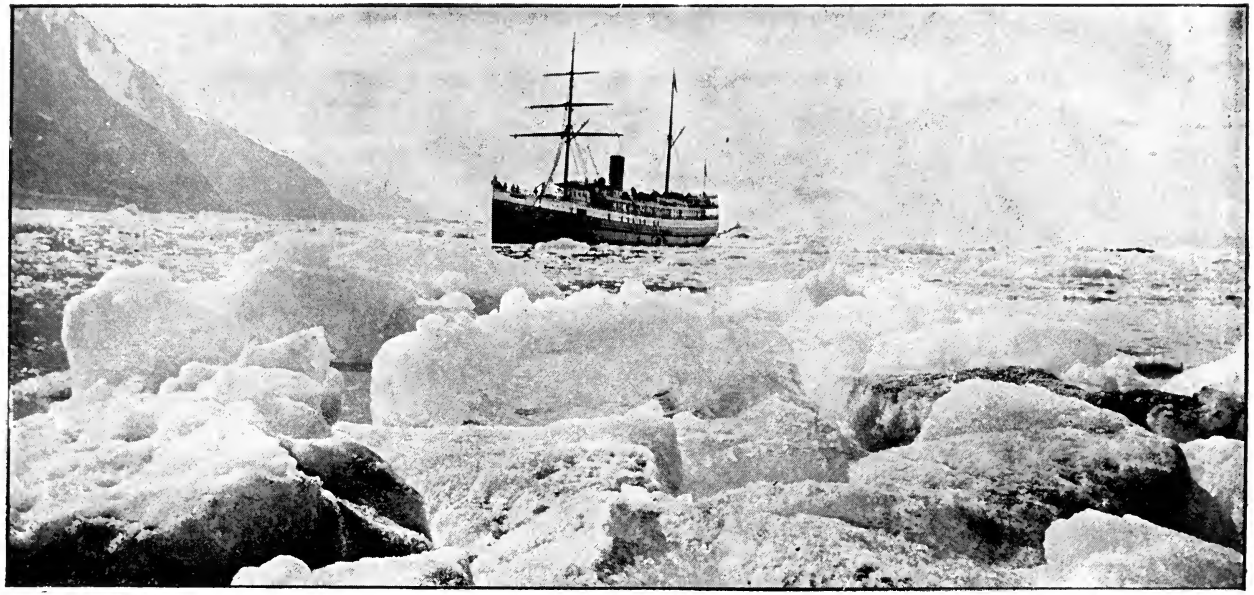
With an altitude of 5,878 feet above the sea, this phenomenal city has an excellent system of water works, fire-companies, a court house costing $150,000, electric illumination, three street railway systems (cable, steam, and electric-motor), two telegraph companies, and a monthly pay-roll of nearly or quite $1,000,000.

The "Air Line" recently constructed by the Northern Pacific Company from Logan to Butte—seventy-one miles—is one of the most grandly picturesque routes of railway on the Continent of North America. By means of its excellent traffic arrangements with the Montana Union Railway, which has a line from Butte to Garrison (on the Northern Pacific) via Anaconda and Deer Lodge, the Northern Pacific is able to run through trains from Chicago to Tacoma, Seattle, and Portland by way of Butte.

Anaconda and Deer Lodge are cities of the Deer Lodge Valley—distant from Butte ten and forty miles, respectively, and almost exactly the same distance (though, of course, in reverse order) from Garrison, the junction-point of the Montana Union with the main line of the Northern Pacific—fifty miles west of Helena. Anaconda has a population of about 6,000, and is developing



FACE OF MUIR GLACIER, FROM THE TOP.



QUEEN, AT GLACIER BAY.

into an important manufacturing center. The smelting works and copper-refinery of the great Anaconda Mining Company are located here, at which 2,000 men find constant employment at good wages. Large foundry, machine, and boiler shops are also in operation, and all branches of trade are well represented and established upon a solid basis. The leading hotel is the "Montana,"—an elegant house—built and owned by Marcus Daly. The population of Deer Lodge is about 1,800 to 2,000. It is the county seat of Deer Lodge County, and is surrounded by an excellent farming country.

The Northern Pacific has branch lines running to Marysville, Rimini, Wickes, Boulder, Elkhorn, and other mining towns of importance in the vicinity of Helena and Butte, but as our time was somewhat limited we did not pay them a visit.

We bade adieu to Butte at 8 A. M. of August 28th, and returning across the "backbone of the continent," through the Homestake Tunnel, and down the wildly grand cañon of the Jefferson River to Logan, proceeded to Bozeman.

Bozeman vies with Missoula in laying claim to the title of "Garden City of the Rockies." It is the county seat, and commercial center as well, of Gallatin County, is situated at the head of the famed Gallatin Valley, and has a population of between 3,000 and 4,000.

It has five hotels (one—the Bozeman—recently opened, that cost upward of $100,000), an elegant opera-house, besides several public halls, a fine public library, two public and two private schools, an academy, national banks, seven churches, all having fine edifices, a United States land office, a number of manufactories (including two flouring-mills), a fine court house, and a combined electric-light and water-works plant. Extensive coal-mines are being worked in the near vicinity, and there are rich mines of gold, silver, iron, and copper near by. Both placer and quartz mining are being energetically pursued, and with such success as to warrant greatly increased work of development.

Placer-mining consists in separating particles of "free" gold (some as fine almost as flour, and from that up to nuggets the size of a pea or larger) from the beds of gravel in which they have been deposited by glacial action. This is accomplished by washing the gravel, either by hand, or, as is now more frequently the case, by hydraulic power, which washes both gold and gravel through long lines of "sluice-boxes," the weight of the particles of gold causing them to settle to the bottom of the boxes, while the lighter gravel is carried on and finally added to the heap of "tailings" at the exit of the sluices.

The surrounding country—the Gallatin Valley—is celebrated as one of the exceptionally fine farming and grazing regions of Montana. Game and fish here abound, and the climate is dry, bracing, and healthful.

Bozeman is a city of shady avenues and delightful homes, and is the seat of much culture and refinement.

We continued on to Livingston on the evening of the 29th. Here Mr. Haynes left me to return to Mammoth Hot Springs.

The time had passed so pleasantly and rapid since we had been journeying together, that I regretted having reached the cross-roads of even temporary separation.

August 31st found me again at my desk, with energy renewed and an increased capacity for work that not even the accumulated pile of neglected correspondence appeared to affect in the least degree.

NORTHERN PACIFIC R. R.

Rates and Arrangements for the Tourist Season.

MINNESOTA SUMMER RESORTS. — The Northern Pacific Railroad will sell round-trip excursion tickets from St. Paul or Minneapolis to Glenwood (Lake Minnewaska) at $5.25; Battle Lake, $7.50; Fergus Falls, $7.50; Detroit Lake, $9.15; Minnewaukan (Devil's Lake), $18.65; Winnipeg, $22.50. From Duluth or Superior to Battle Lake, $7.50; Fergus Falls, $7.50; Detroit Lake, $9.15; Minnewaukan, $18.65; Winnipeg, $22.50. From Ashland, Wis., to Battle Lake, $9.00; Fergus Falls, $9.00; Detroit Lake, $10.65; Minnewaukan, $20.15; Winnipeg, $22.50. Tickets on sale May 1st to September 30th, inclusive. Good going to Minnesota resorts one day (from Ashland two days), to Minnewaukan (Devil's Lake) and Winnipeg two days from date of sale. Good to return on or before October 31st.

YELLOWSTONE PARK RATES.—The Northern Pacific Railroad, the only rail line to the Park, will sell round-trip excursion tickets from May 29th to September 28th (both dates inclusive) at the following rates:

A $120.00 Ticket, including the following traveling expenses, from St. Paul, Minneapolis, Duluth, or Ashland on the east, and Portland, Tacoma, or Seattle on the west, to and through the Park (including Yellowstone Lake) and return to starting point, viz.: Railroad and stage transportation, Pullman sleeping car fares, meals on Northern Pacific dining cars, and board and lodging at the Park Association Hotels six and one-quarter days.

A $50.00 Round-trip Ticket, St. Paul, Minneapolis, Duluth, or Ashland to Livingston and return.

A $14.00 Ticket, Livingston to Mammoth Hot Springs Hotel and return, including rail and stage transportation, breakfast going and dinner returning on Park Branch dining car, and one and three-quarter days' board at Mammoth Hot Springs.

A $50.00 Ticket, Livingston to Cinnabar and return (breakfast going and dinner returning on Park Branch dining car), Cinnabar to Mammoth Hot Springs, Norris, Lower and Upper Geyser Basins, Yellowstone Lake, Grand Cañon and Falls of the Yellowstone and return, including rail and stage transportation, and six and one-quarter days' accommodations at the Association Hotels.

Limit and Conditions of Tickets.—The $120.00 Ticket will be on sale, at eastern and western termini named, May 29th to September 28th, inclusive; by eastern lines, May 28th to September 27th, limit 40 days; good going 30 days, returning 10 days, but must be used in the Park before October 6th. Stop-overs within final limit at or east of Billings, and at or west of Helena. Return portion of ticket must be signed and stamped at Mammoth Hot Springs Hotel,

after which ticket must be presented on Main Line train for return passage within one day from such date. Stop-overs in Park granted at pleasure of holder within final limit of ticket.

Limit of $50.00 Rail Ticket, same as above. Stop-over privileges allowed within limits. Return portion of ticket must be stamped and signed at Livingston ticket office.

The $14.00 and $50.00 tickets, on sale at eastern and western termini between dates first named above, at Livingston May 31st to September 30th, both dates inclusive, are good if used in the Park any time between June 1st and October 6th, both dates inclusive, and do not require identification of purchaser.

The hotel service in the Park is now very complete. Tourists can stop at any of the principal points of interest with the assurance that comfortable accommodations will be supplied them.

MONTANA AND EASTERN WASHINGTON POINTS.—The Northern Pacific Railroad sells daily round-trip excursion tickets to Bozeman at $55.00; Helena and Butte, $60.00 (choice of routes returning, via Northern Pacific, Union Pacific, or Great Northern Ry. Lines); Missoula, $62.50; Spokane, $70.00 (choice of routes returning, via Union Pacific or Northern Pacific Lines), and Medical Lake, $70.00.

These tickets are of iron-clad signature form; require identification of purchaser at return starting point, limited to 90 days, good going 30 days and returning 30 days. Stop-overs granted at any point within limits stated.

To Springdale (Hunter's Hot Springs), Mont., and return, $50.00; on sale daily; good 40 days—going limit 30 days, return limit 10 days.

NORTH PACIFIC COAST EXCURSIONS.—An $80.00 Round-trip Individual Excursion Ticket, St. Paul, Minneapolis, Duluth, or Ashland to Tacoma, Portland, Seattle, or Victoria, is on sale daily at points first named and by eastern lines.

Tacoma, Seattle, Victoria, or Portland tickets, at above rates, will be *issued*, going via Cascade Division, returning via Columbia River Line, or vice versa; Portland tickets via either Cascade Division or Columbia River, returning via Union Pacific to either Omaha or Kansas City, or to St. Paul via Union Pacific Railway through Sioux City; and Victoria tickets good to return via Canadian Pacific to either Winnipeg, Pt. Arthur, St. Paul, or Minneapolis.

CONDITIONS.—Above tickets limited to six months from date of sale; good, going trip, 60 days to any one of North Pacific Coast termini named, returning any time within final limit.

ALASKA EXCURSIONS.—An excursion ticket will be sold from eastern termini named to Sitka, Alaska, at $175.00, which rate includes meals and berths on the steamer. Tickets on sale May 1st to September 30th. Limit, six months. Going to Tacoma, 60 days, returning within final limit, holder to leave Sitka on or before October 31st. Tickets will be issued to return either via the Northern Pacific or the Canadian Pacific and Great Northern Ry. Lines to St. Paul or Minneapolis. Usual stop-over privileges granted. Steamer accommodations can be secured in advance by application to any of the agents named below. Diagrams of steamers at office of General Passenger Agent at St. Paul.

A NOTABLE BOOK.—Perhaps the most interesting book yet written on Alaska is that from the pen of Mrs. General C. H. T. Collis, bearing the title "A Woman's Trip to Alaska," from the press of the Cassell Publishing Company, New York.

CALIFORNIA EXCURSION RATES.—The Northern Pacific Railroad will sell round-trip excursion tickets from St. Paul, Minneapolis, Duluth, or Ashland, as follows:

To San Francisco going via either the Cascade Division or the Columbia River to Portland, and the Shasta route or the ocean to San Francisco; returning same route, or by the Southern line to Council Bluffs, Omaha, Kansas City, Mineola, or Houston, at $95.00; to New Orleans or St. Louis, at $101.00.

To Los Angeles going via Portland and San Francisco, and returning same route at $114.00; or returning via Sacramento and Ogden to Council Bluffs, Omaha, or Kansas City, at $104.50; to St. Louis, at $110.50.

To San Diego going via Portland, San Francisco, and Los Angeles, and returning same route, at $124.00; or returning via Sacramento and Ogden to Council Bluffs, Omaha, or Kansas City, at $104.50; to St. Louis, at $110.50.

Tickets returning from Los Angeles or San Diego, via Ogden, will be issued reading via San Francisco and Ogden, at rates $4.00 higher than returning via Sacramento and Ogden. Tickets via ocean include meals and berth on steamer.

At the eastern termini of the southern transcontinental lines, excursion tickets will be sold, or orders exchanged, for tickets to San Francisco, returning via either the Shasta route, the all-rail line to Portland, or the ocean and the Northern Pacific to St. Paul, Minneapolis, Duluth, or Ashland, at rate $15.00 higher than the current excursion rate in effect between Missouri River points, Mineola, or Houston and San Francisco. The steamship coupon includes first-class cabin passage and meals between San Francisco and Portland.

Return coupons reading from Missouri River points to Chicago or St. Louis will be honored from St. Paul or Minneapolis, either free, or with a small additional charge, according to the route.

These excursion tickets allow six months' time for the round trip; 60 days allowed for west-bound trip up to first Pacific Coast common point; return any time within final limit.

General and Special Agents.

A. D. CHARLTON, Assistant General Passenger Agent, 121 First St., Portland, Ore.
A. L. CRAIG, Assistant General Ticket Agent, St. Paul, Minn.
B. N. AUSTIN, Assistant General Passenger Agent, St. Paul, Minn.
J. L. HARRIS, New England Agent, 306 Washington Street, Boston, Mass.
E. R. WADSWORTH, General Agent, 210 South Clark Street, Chicago, Ill.
GEO. R. FITCH, General Eastern Agent, 319 Broadway, New York City, N. Y.
C. B. KINNAN, Eastern Passenger Agent, 319 Broadway, New York City, N. Y.
A. D. EDGAR, General Agent, corner Main and Grand Streets, Helena, Mont.
W. M. TUOHY, General Agent, 23 East Broadway, Butte, Mont.
R. A. EVA, General Agent, Duluth, Minn.
H. SWINFORD, General Agent, Railway Station, Water Street, Winnipeg, Manitoba.
A. ROEDELHEIMER, General Agent, corner High and Chestnut Streets, Columbus, O.
G. G. CHANDLER, General Agent, 621 Pacific Avenue, Tacoma, Wash.
I. A. NADEAU, General Agent, Seattle, Wash.
T. K. STATELER, General Agent Pass. Dept., 638 Market Street, San Francisco, Cal.

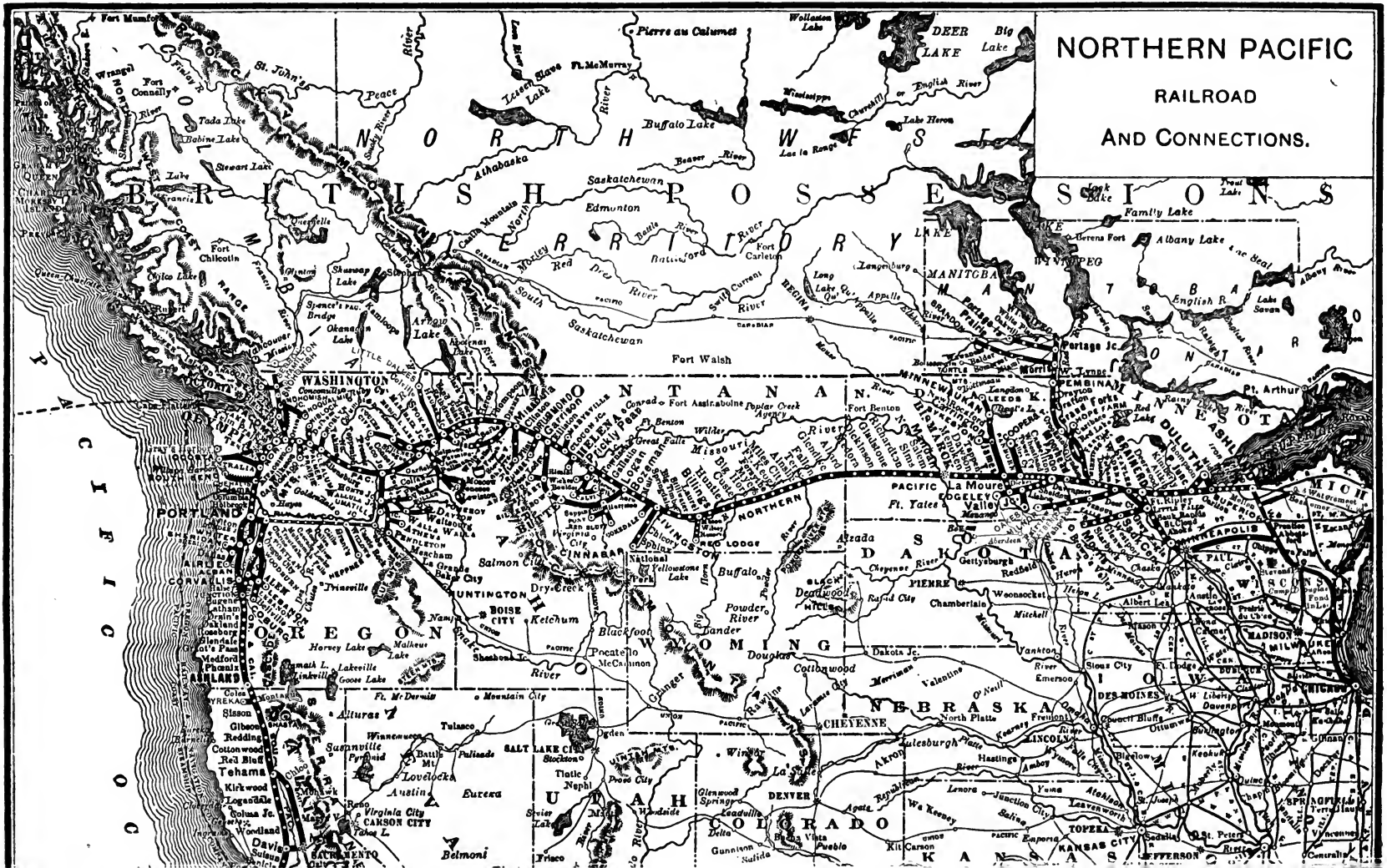
Traveling Passenger Agents.

C. E. BRAY, 306 Washington Street, Boston, Mass.
J. H. ROGERS, JR., 47 South Third Street, Philadelphia, Penn.
L. L. BILLINGSLEA, 47 South Third Street, Philadelphia, Penn.
GEO. D. TELLER, 44 Exchange Street, Buffalo, N. Y.
D. W. JANOWITZ, 42 Jackson Place, Indianapolis, Ind.
A. A. JACK, 153 Jefferson Avenue, Detroit, Mich.
T. L. SHORTELL, 104 North Fourth Street, St. Louis, Mo.
J. J. FERRY, 132 Vine Street, Cincinnati, Ohio.
T. S. PATTY, Read Hotel, Chattanooga, Tenn.
JOHN N. ROBINSON, 397 Broadway, Milwaukee, Wis.
OSCAR VANDERBILT, 403 West Locust Street, Des Moines, Iowa.
W. F. SHERWIN, Elmira, N. Y.
THOS. HENRY, 128 St. James Street, Montreal, Canada.
THOS. RIDGEDALE, 79 York Street, Toronto, Ont.
T. D. CAMPBELL, 144 Superior Street, Cleveland, Ohio.
C. G. LEMMON, 210 Grand Central Station, Chicago, Ill.
FRANK O'NEILL, 121 First Street, Portland, Ore.
W. N. MEARS, 621 Pacific Avenue, Tacoma, Wash.
W. H. WHITAKER, St. Paul, Minn.
R. W. GLADING, Thomasville, Ga.

J. M. HANNAFORD,
General Traffic Manager,

CHAS. S. FEE,
General Passenger and Ticket Agent,

ST. PAUL, MINN.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RAILROAD
AND CONNECTIONS.
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NEBRASKA
UTAH
COLORADO
KANSAS
PACIFIC OCEAN
Fort Mumford
Pierre au Calumet
DEER LAKE
Big Lake
Wollaston Lake
Fort Connelly
Peace River
Athabaska
Saskatchewan
Edmonton
Buffalo Lake
Lake Heron
Lake Winnipeg
Albany Lake
Portage la Prairie
Fort Walsh
Fort Assiniboine
Fort Benton
Poplar Creek Agency
Fort Chilcotin
Fort Carleton
Battleford
Red Deer River
South Saskatchewan
Swift Current
Long Lake
Qu'Appelle
Pembina
Pt. Arthur
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Salmon City
Dry Creek
Boise City
Ketchum
Blackfoot
Pocatello
McCammon
Shoshone Jc.
Harney Lake
Malheur Lake
Lakeville
Goose Lake
Ashland
Ft. McDermit
Mountain City
Winnemucca
Battle Mt.
Palisade
Eureka
Austin
Virginia City
CARSON CITY
Lake Tahoe
Truckee
Sacramento
Davisville
Suisun
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Denver
Cheyenne
Laramie
Rawlins
Green River
Evanston
Wyoming
Omaha
Council Bluffs
Lincoln
Nebraska City
Plattsmouth
Fremont
Hastings
Kearney
Grand Island
North Platte
Julesburg
Akron
Sterling
Yuma
Atchison
Leavenworth
Topeka
Kansas City
Atchison
St. Joseph
Seneca
Wichita
Emporia
Junction City
Salina
Abilene
Ellsworth
Hays City
Kit Carson
Las Animas
Trinidad
Raton
Santa Fe
Albuquerque
Winslow
Flagstaff
Needles
Mojave
Barstow
San Bernardino
Riverside
Redlands
Pasadena
Los Angeles
Santa Barbara
Ventura
Santa Monica
Anaheim
Santa Ana
San Diego
Yuma
Tucson
Deming
Silver City
Albuquerque
Las Vegas
Salt Lake City
Ogden
Tintic
Nephi
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